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NEOCORE GOES IT ALONE

XML database now can be installed on stand-alone server, or in container

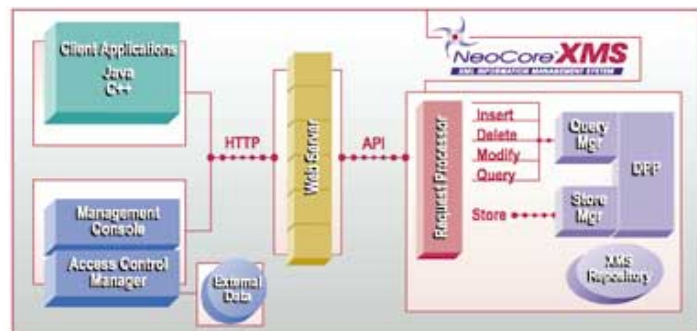
BY ALAN ZEICHICK

NeoCore Inc. has released an update of its native XML database that it claims, for the first time, moves the technology from its niche as an embedded database to a form more suitable for mainstream applications.

The bottom-line benefit to

databases like NeoCore's XML Information Management System (XMS), claimed Eric "Ric" Miles, NeoCore's president and CEO, is that it cuts the development time and ongoing maintenance by at least 50 percent. "That's attractive in times like

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NeoCore's XMS is no longer a purely embedded database system.

Trio Pushes Web Services Specification

Business Process Execution Language draws mixed reaction from competitors

BY EDWARD J. CORREIA

Stretching the limits for the length of new acronyms, BEA Systems Inc., IBM Corp. and Microsoft Corp. have released BPEL4WS, or Business Process Execution Language for Web Services, an XML-based flow language that defines how complex business processes should connect and interact via Web services. This move has drawn sharp criticism from authors of similar specifications, including those under consideration by the World Wide Web Consortium.

In addition, the trio released a pair of specifications—WS-Coordination and WS-Transaction—that describe how a particular Web service will interact with others

and how its requirements are to be defined. The specifications also define how to coordinate and track those requirements through to the successful completion or failure of a transaction and how to react to faults encountered during execution.

According to Bob Sutor, IBM's director of e-business standards and strategies, the specs were needed because Web



Kiger doesn't view BEA's shift toward BPEL4WS as a change of allegiance.

services protocols to date were designed only for individual Web services to work with other individual services, and that to work properly with complex sets of transactions, methods must be defined for how groups of Web services will work with other groups of services.

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TogetherSoft Picks Up WebGain Studio

BY ALAN ZEICHICK

As the pieces of the failed WebGain Inc. continue to find new homes, the latest orphan to be adopted is WebGain Studio. Oracle Corp. already purchased WebGain's TopLink; the only portion of the company still in limbo is Application Composer.

According to Keith Boswell, TogetherSoft's vice president of marketing and business development, his company is acquiring the source code, packaged products and support contracts for the entire WebGain Studio suite, including VisualCafé, Quality Analyzer, Structure Builder and Business Designer. The terms of the acquisition were not dis-

closed, but Boswell indicated that it wasn't expensive: "It's not causing us to go out and get more funding," he laughed.

What's the benefit to TogetherSoft? "If you want to attract extra customer base, you can either convert people wholesale, or do something more," said Boswell. "We had built a conversion program that would take WebGain project files and move them to Together Control Center, but we thought, if what we're after is market share, we should pick up the product line itself.

"[The acquisition] gives us a bigger footprint in the industry," he added, "and when we encounter customers who aren't ready for our higher-end set of tools, I can offer [WebGain Studio] as well. That should give Borland a swift kick in the teeth."

Boswell said that in the near term, TogetherSoft would continue to sell WebGain Studio to new and existing customers, as well as provide sup-

port and maintenance for the current version. However, the company couldn't commit to evolution of the development environment. "We're going to look at Mystique, which is the next version of WebGain. We inherit the code from that, and we want to see what phase it's in, and see what makes sense. But until our development staff brings that code in-house and takes a look at it, I can't tell you."

The reason TogetherSoft (www.togethersoft.com) isn't acquiring WebGain's Application Composer, said Boswell, is that another vendor had already begun negotiations to buy that product. He was not able to disclose who that vendor is. He added that no one from WebGain had been hired as part of this deal. "We're not going to go on a major hiring binge into the former WebGain staff, but I'm not patently ruling [hires] out." ■

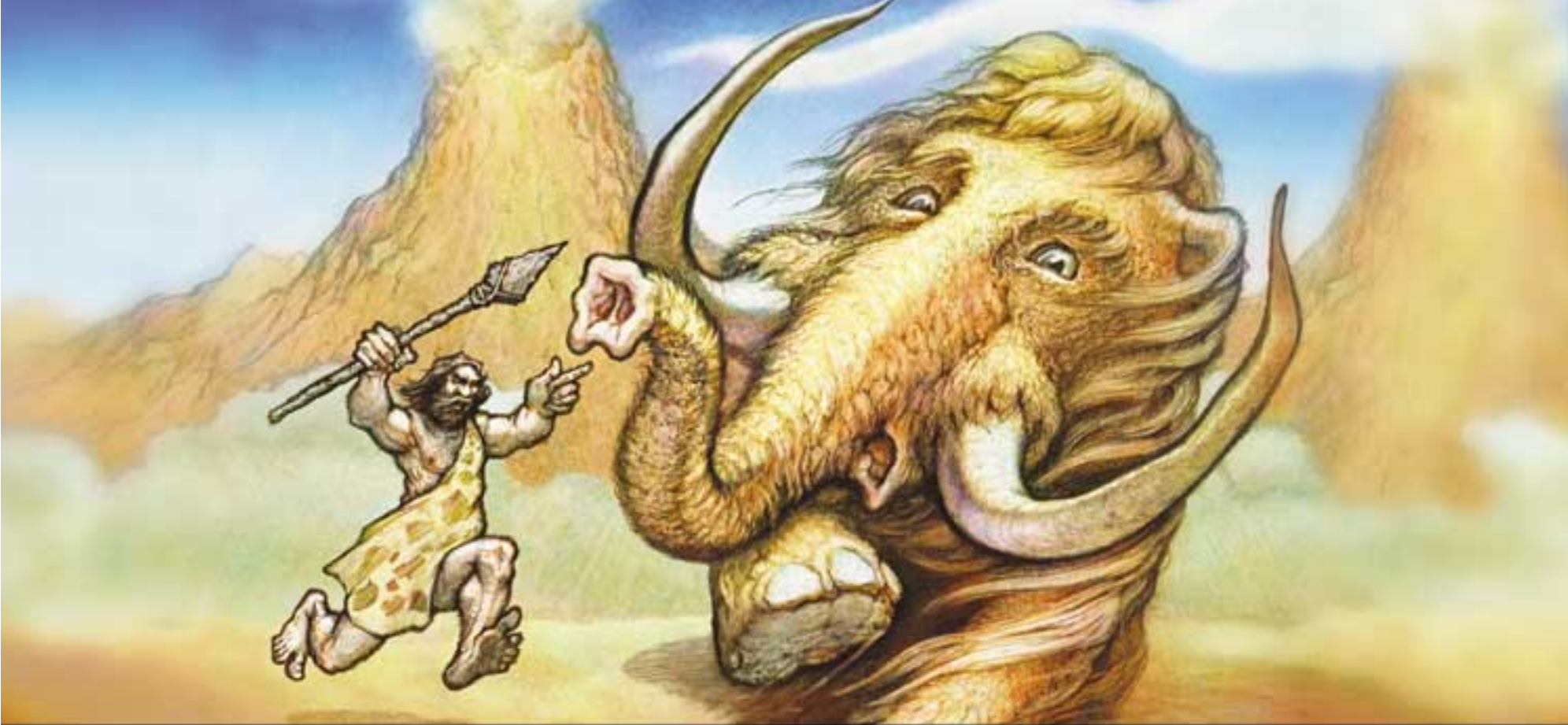
STRUCTURED PROGRAMMING CREATOR DIES

Edsger W. Dijkstra, the father of modern computer programming, died Aug. 16 at his home in the Netherlands after a long illness. He was 72.

Dijkstra was the creator of structured programming, the first program design method to state that routines should have clearly defined entry and exit points. This view is now so fundamental a part of the modern perspective on coding that it is impossible to think of how things were done before that. Only assembly language programmers have a glimpse of that prestructured world, and even then, it's just a glimpse.

Dijkstra also invented the shortest-path algorithm and numerous concepts and terms widely used today, including deadly embrace, semaphores

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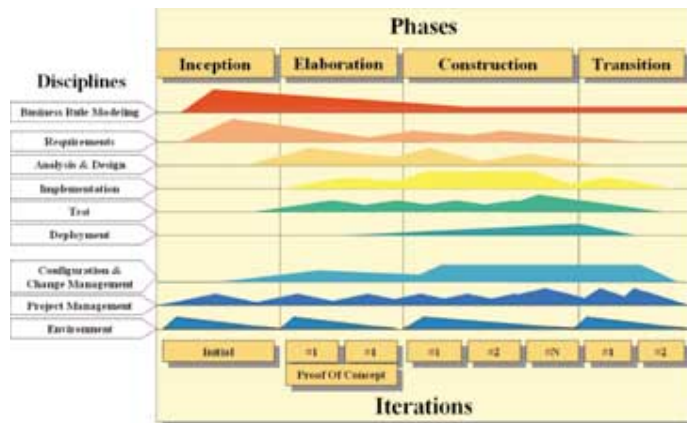
Blaze Plugs Biz Rules Into RUP

Fair Isaac acquires HNC Software, along with Blaze Advisor, for \$810M

BY ALAN ZEICHICK

Fair, Isaac & Co. Inc. has released a free plug-in for Rational Software Corp.'s Unified Process that provides a linkage between RUP and Blaze Advisor, a business rules development and management system.

Ken Molay, product evangelist for Blaze Advisor (www.blazesoft.com), said that the company was focusing on plug-ins for specific vertical industries to help developers use Blaze Advisor, but also was working with Rational to help the company address large enterprises across multiple vertical markets, and that evolved into Blaze's business rules plug-in for RUP. "We used Rational's preferred arrangement for hooking new technologies and methodolo-



Blaze's business rules plug-in does its heavy lifting during the inception phase of the Rational Unified Process.

gies into their standardized Rational Unified Process. We'll be including a Web add-on, documentation and best practices on how to deal with business rules," he said.

"Right now, if RUP talks

about business rules, it's treated as another single step in the process—"incorporate your business rules," Molay explained. "We wanted to have a much more developed and structured methodology for people to use

in the entire design, development and iterative maintenance upkeep of their project."

The business rules plug-in provides a link between RUP and Blaze Advisor, which costs \$20,000 per developer seat, and about \$30,000 per processor for deployment. RUP's user interface does not replace Blaze Advisor's interface, which is still where developers actually create and manage the rules.

"We become just another member of the RUP phases diagram, where you're looking at requirements, analysis and design, where you can slot in business rules modeling as one of those phases," said Molay. "It starts big in the inception phase, and then trails off through elaboration, working down to construction and tran-

sition. The modeling point is big in the inception and elaboration phases."

Fair Isaac (www.fairisaac.com) purchased Blaze Advisor last month along with its acquisition of HNC Software Inc., in an all-stock transaction valued at approximately \$810 million. HNC had purchased the Blaze Advisor product line from Brokat Technologies Inc. in August 2001 for \$20 million in cash. Brokat had purchased Blaze Software Inc. in September 2000 for \$579 million in stock. Blaze itself had been launched in 1986 as Neuron Data, a company specializing in expert systems and other AI technologies, but renamed itself Blaze in August 1999 in anticipation of a March 2000 initial public stock offering. ■

Nimble Adds ODBC, XQuery Interfaces to Integration Suite

BY CHRISTINA M. PURPI

Developers can now access Nimble Technology Inc.'s Integration Suite as if it were a relational database, thanks to version 2.0's implementation of ODBC and XQuery interfaces.

The benefit of those interfaces, explained Suzan DelBene, CEO of Nimble (www.nimble.com), is that developers now can interact with Integration Suite just like they would with any other data source. "That's important because companies have existing investments in reporting tools and apps that they want to

maintain...they want to be able to maintain that knowledge while expanding the amount of data they're connected to."

The suite's Concordance Developer, which enables different systems with different identifications to integrate, and allows developers to create matches between disparate data, received an enhanced user interface and access to more third-party tools in version 2.0.

DelBene claimed that Nimble is the first data integration company to provide an integration suite that supports ODBC. One of the key differentiators,

she explained, is that Integration Suite can support all types of data, not just relational data, including data on mainframes, enterprise application systems data, relational data, flat files and Excel spreadsheets.

Customers that have existing investments in tools that were written to work with ODBC systems wanted to use those tools with Integration Suite, said DelBene. "We are an XML-based integration system, and we had an XML interface—those tools haven't migrated to support XML as a query language, like XQuery, so

we needed to provide support for those tools we're working with today, which is ODBC."

The benefit for application developers, claimed DelBene, is that the applications they've written to work with traditional databases now can work with an expanded number of disparate data sources using the ODBC interface.

The newest version of Integration Suite also can communicate with LDAP-compatible databases, and works with Crystal Decisions' Crystal Reports.

Version 2.0 was released in

early August, runs on Solaris and Windows and is priced at \$45,000 and 30,000 per server, respectively. ■

Japanese Firm Acquires Turbolinux

Turbolinux Inc., a founding member of the UnitedLinux initiative and a leading Linux platform vendor in Asia, late last month sold its Linux software business and name to Software Research Associates Inc., a Japanese software company. Terms of the sale were not disclosed.

Turbolinux (www.turbolinux.com) will become a division of SRA, with headquarters in Tokyo; a U.S. office will be kept open. What remains of the old Turbolinux, which has not yet been renamed, will continue offering its non-open source server provisioning software, called PowerCockpit. An announcement about the future direction of the new company is expected in the next few weeks. ■

COMPUWARE REVS DRIVERSTUDIO, DEVPARTNER STUDIO

BY CHRISTINA M. PURPI

Compuware Corp. has updated its DriverStudio device-driver development tool to include a Host/Target Architecture and to support Windows XP. The company also has integrated its DevPartner Studio tool with Microsoft's Visual Studio .NET.

The key new feature in DriverStudio is what Compuware (www.compuware.com) calls its Host/Target Architecture, which allows developers

to debug a driver on a remote machine that's connected to the development tool via a standard TCP/IP-based network. "The system doesn't care [where it is]," according to John Carpenter, DriverStudio product manager.


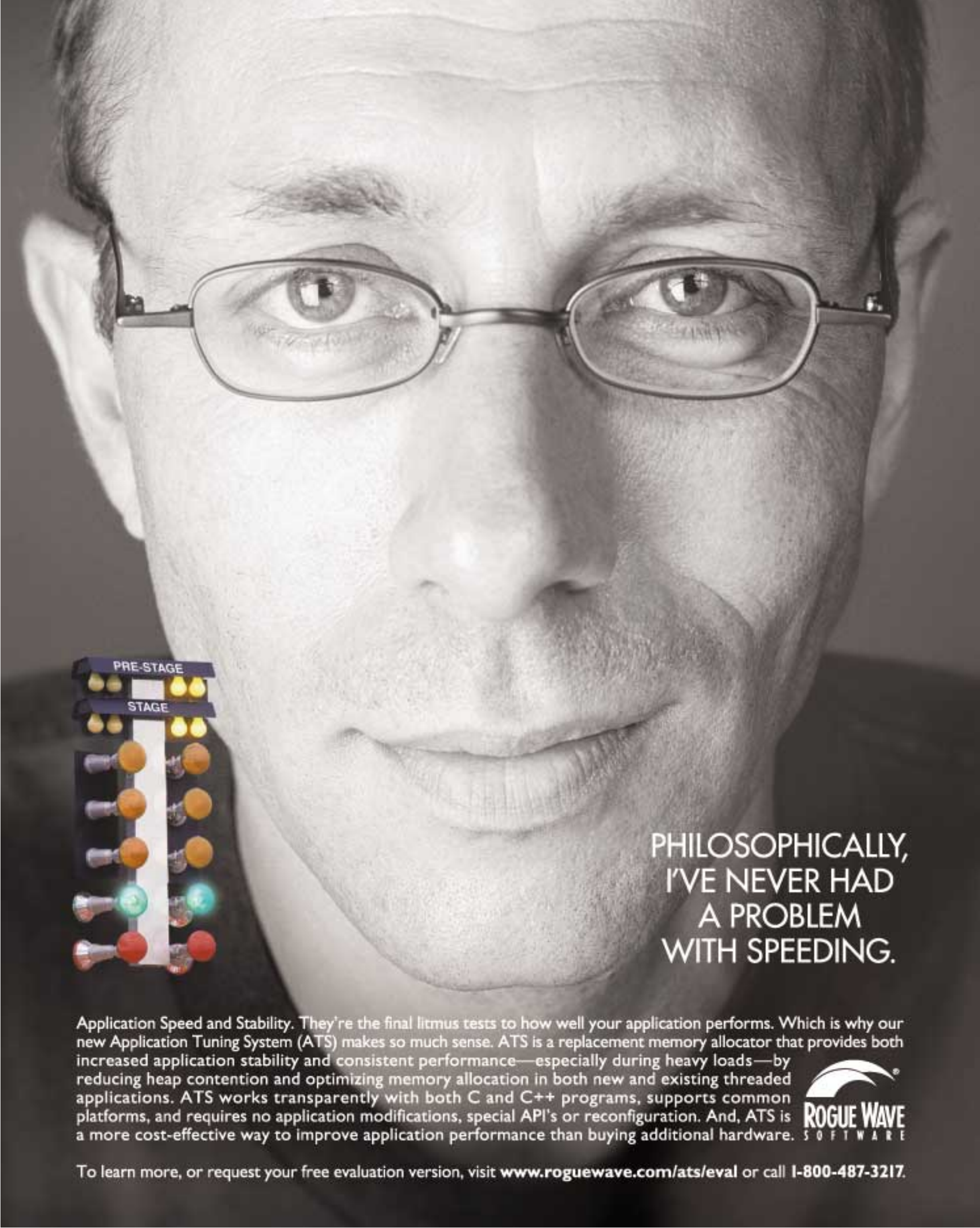
With the new version, a developer can now use the DevPartner tools with the Windows XP operating system, claimed Carpenter. "[Windows XP] doesn't break us—you can develop device drivers that run

underneath XP." Version 2.7 is currently available and costs \$2,499 per developer.

The newly released version 7.0 of DevPartner Professional Edition, Compuware's developer productivity tool, now integrates with Microsoft's Visual Studio .NET to provide access to the DevPartner features, including source code review, runtime error detection, performance analysis, coverage analysis and distributed analysis.

"The average developer using .NET can never be sure where VS.NET ends and DevPartner begins because it's seamlessly integrated," claimed Peter Varhol, product manager for DevPartner.

This version also is focused on developers who have mixed environments using both VS.NET and the older Visual Studio 6. DevPartner 7.0 was scheduled to be available on Aug. 19 and costs \$1,495 per developer seat. ■



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ComponentSource Places Value on Software Assets

BY DAVID RUBINSTEIN

In an effort to help developers understand the business benefits of software asset reuse, component vendor ComponentSource will make public the metrics it uses with its enterprise customers that put a value on assets that customers can use to make buy-versus-build decisions.

The release of this data, announced last week, coincides with the company's rebranding of its enterprise component reuse solution, now called Software Asset Value Engineering for IT, or SAVE-IT. ComponentSource continues to run its component marketplace at www.componentsource.com.

"For the first time, we're presenting value data to the marketplace," said ComponentSource CEO Sam Patterson. "A lot of companies do function-point analysis, or interface-point analysis, but we found our customers use source lines of code, because it's easier to determine what is an executable line of code and to determine the cost."

Patterson explained that a development manager considering the purchase of a reporting component might use the metrics to determine he would use only about 10 percent of the component's functionality, but could weigh that against the cost of having a staff programmer create tens of thousands of lines of code to duplicate that functionality. "Cost avoidance can be a large number in that kind of case," Patterson said.

ComponentSource's data, he claimed, can help companies ascertain how much they could gain through the institution of a reuse initiative. SAVE-IT, which takes a three-pronged approach to reuse, offers a company a set of best practices to create an asset management infrastructure with the least impact on the development culture, as well as an asset catalog and a partnership model that allows companies to create their own component markets for their customers or users.

Through the SAVE-IT Process best practices, ComponentSource makes available a workshop that provides customers with a self-sufficient infrastructure for component reuse, helping them identify assets that already exist and pro-

viding a road map for a reuse initiative. The company's SAVE-IT Catalog provides business hooks to track and manage assets beyond a repository view, such as those housed across groups or in

CRM systems, while SAVE-IT Content provides a private marketplace similar to the Amazon.com model in which ComponentSource partners can create a component "store."

The pieces of SAVE-IT can be purchased individually; the entire offering sells for between \$40,000 and \$125,000 to shops of between 50 and 100 developers, with the variation coming

from the amount of consulting work necessary. For organizations with more than 100 developers, the complete installation on a multiyear contract can cost upward of \$750,000. ■

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News Briefs

COMPANIES

Flashline Inc., which sells software-reuse and component-management tools, has created a Software Development Productivity Council, a team of consultants who will advise the company and its customers on ways of improving development processes. The initial members of the SDPC include Scott Ambler, Martin Griss, Jim Highsmith, Wayne Lim and William Ulrich . . . **Macromedia Inc.** has jumped into the pet-supplies business with its own sample Java blueprint application. The Macromedia Pet Market, designed to have the same functionality as Sun's Java Pet Store and Microsoft's .NET Pet Shop, uses Macromedia's Flash MX, Dreamweaver MX, ColdFusion MX and Fireworks MX . . . **Software AG**, which sells the Tamino XML database server, is working with **Magic Software Enterprises Ltd.** to bring the server to IBM's iSeries minicomputers. Magic's eDeveloper development tool for the iSeries (formerly known as the AS/400) lets Tamino access data directly from the minicomputer via SOAP . . . **MQSoftware Inc.** will be reselling **Primeur's** DataSecure add-ins for IBM's WebSphere MQ message-queuing middleware in the U.S. Primeur, based in Italy, had not had a U.S. presence for its mainframe-based security add-in for WebSphere MQ, formerly known as MQSeries . . . **Rational Software Corp.** has purchased **NeuVis Inc.**, which sold NeuArchitect, a rapid-application development suite for J2EE app servers. Terms of the acquisition of the privately held company were not disclosed . . . **Sun Microsystems Inc.** has renamed its Enterprise Services division. Citing synergy with its holistic strategy for designing, delivering and maintaining Sun-based solutions, the division is now known as Sun Services.



PRODUCTS

Uruguay-based Artech has shipped **DeKlarit 1.1**, a RAD tool for Visual Studio .NET. The new release provides a set of metadata-based tools by automatically generating Windows Forms or Web Forms that can access ADO.NET components . . . **Sybase Inc.** has updated its **EAServer** application server to offer J2EE 1.3 compliance. The company claims that EAServer 4.1, available for AIX and HP-UX, is the only application server to integrate Web services with Java, C/C++, COM and its own PowerBuilder IDE. The company also issued a statement committing that its **PowerBuilder** IDE will be upgraded to support .NET, though no time frame was provided. In addition, Sybase has released a version of Borland's **JBuilder 7 Enterprise** designed specifically for deployment to EAServer . . . **Silicon Graphics Inc.** has



updated **OpenGL Performer**, its toolkit for building OpenGL-based 3D graphics applications for Irix or Linux. Version 2.5.2 supports the substitution of complex objects with pre-

rendered images, real-time shadow projection on rendered objects, and the ability to modify dynamic model shader parameters in real time . . . **KnowNow Inc.** has created a connector between its Event Router and Microsoft's Excel that allows the spreadsheet to connect to external data sources such as data corporate systems or live data feeds. A starter kit that includes the Event Router and **KnowNow**

Application Connector for Excel costs \$10,000 . . . **Advanced Micro Devices Inc.** has pledged support within its MIPS core processor line for Microsoft's Windows CE .NET 4.1. The processors that AMD is offering for Windows CE are the **Alchemy Au1000**, **Au1100** and **Au1500** . . . **Raining Data Corp.** has updated its **Omnis Studio** data-



base application development software. Omnis Studio 4.2 now supports Oracle9i and Informix 9.1, Windows XP and Mac OS X, and XML. It also includes a Blowfish encryption component and new multithreading capabilities. Raining Data was formerly known as Pick Systems . . . **Parasoft Corp.** has released a version of its **Jtest** Java-based automated unit testing tool for Sun ONE Studio, formerly known as Forte for Java. Jtest supports EJBs, design by contract, JSP and Java servlets. The tool, which runs on Linux, Solaris and Windows, costs \$3,495 per seat . . . **ComponentOne LLC** has released three new Windows Forms components as part of its \$649.95 ▶ continued on page 12

Headway's ReView Now Includes Metrics

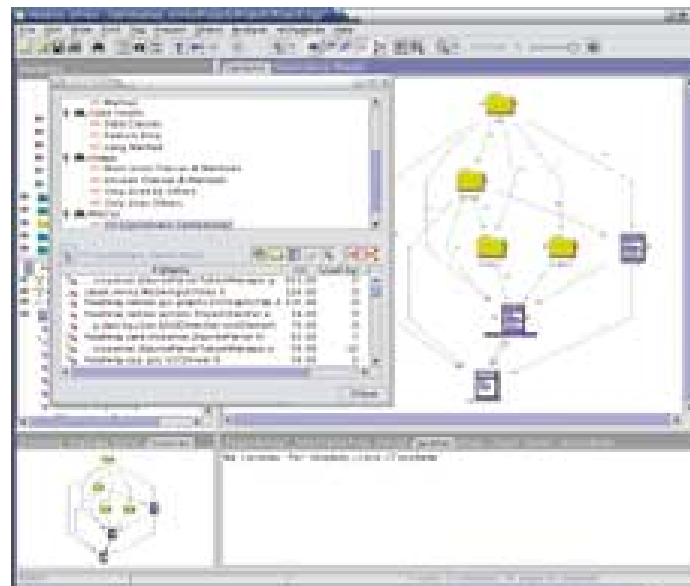
BY CHRISTINA M. PURPI

Headway Software Inc. has enhanced its ReView source visualization tool with new metrics and source code analysis features.

The new metrics in ReView 3.2.5 come in different sets, according to Paul Hickey, vice president of partners at Headway (www.headwaysoft.com), covering basic source code, methods, object-oriented classes and graphics. Examples include a "Number of Children" metric, which measures the number of immediate subclasses subordinate to a class in the hierarchy, and a "Comment Percentage" metric, which calculates the total lines of comments divided by the total lines of code less the number of blank lines.

"Developers never get a sense of how [metrics] impact code," claimed Hickey. He explained that with the addition of these metrics, finding problem areas in code is much easier because the problems are viewable as graphical representations of code.

For nonexperienced users, it was difficult to identify the area



Headway's metrics fall into size, complexity and object-oriented categories.

of code that is most problematic in previous versions of ReView. Now, according to Hickey, the metrics lead you to the exact area that caused the problem. "In a nutshell, ReView gives architects and engineers control over an evolving codebase."

Headway added codebase snapshots to version 3.2.5, which Hickey described as the first public release of version 3. In previous versions of ReView,

there were few or no tools to help developers manage and control changes in their codebases, according to Hickey. "These 'snapshots' of your codebase enable you to do comparisons [to earlier versions] to manage change in software over time."

ReView, which can analyze Ada, C and C++ code, runs on Linux, Solaris and Windows workstations and costs \$3,000 per developer. ■

Rogue Wave Brings Servlets to C++

BY ALAN ZEICHICK

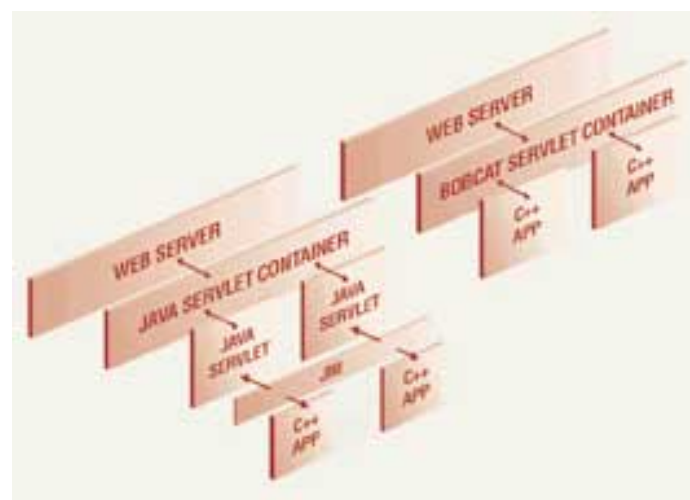
Rogue Wave Software Inc. believes that there's more to modern-day software development than managed runtime environments like Java and .NET. That's why it has introduced Bobcat, its servlets container for C++ that the company calls an alternative to the often-used Java Native Interface (JNI) or Common Gateway Interface (CGI).

According to the company (www.roguewave.com), both JNI and CGI offer limitations to C++ developers. With JNI, the company claims that the interface provides access only to C methods, and not C++ classes and methods, and therefore in order to work with JNI, developers must write Java code to construct and manage an instantiation of the C++ object. With CGI, the company says, each request spawns a new process, which adds overhead, consumes resources and makes it hard to

maintain application state. By contrast, the company claims that its Bobcat servlets container for C++ is based on the Java Servlet API, offering the same features and compatibility, without having to use Java or run in a JVM.

Bobcat is delivered as a set of C++ classes that allow implementations of generic servlets,

HTTP servlets, cookies and sessions, and all servlets run in memory. They are available for Linux, Unix and Windows C++ compilers, and integrate with the Apache and Microsoft IIS Web servers. Prices start at \$495 per developer seat, and \$1,579 for deployment on between one and eight server processors. ■



Rogue Wave claims that its Bobcat servlets container is easier for C++ programmers to implement than JNI.



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Mainsoft's Porting Tool Now Supports VS.NET

BY ESTHER SCHINDLER

Porting software always seems to require compromises. Either you budget huge amounts of time to move the code from one platform to another, or you make lowest common denomi-

nator design choices that ensure everyone is equally unhappy. With its release of Visual MainWin 5, Mainsoft Corp. is promising a better answer.

According to the company, Visual MainWin enables devel-

opers to deploy simultaneously on Linux, Unix and Windows by extending Microsoft's Visual C++ 6.0, Visual C++.NET, and with the release of version 5, Visual Studio .NET.

The new version also now

supports Microsoft's MSXML SDK (ported to Unix by Mainsoft), and includes more security features using a link to RSA Security's libraries and its tool for developing HTTPS/SSL-compatible applications.

Its biggest advantage, according to Simon Peel, Mainsoft's vice president of marketing, is that developers can focus on adding features to their programs rather than worrying about how they'll port them to another platform or how long it will take. "It's the best of both worlds," Peel claimed. "They get the productivity of writing for VS.NET, getting code written as fast as possible. But they also get the platform flexibility of Java."

It works like this. A developer writes code in Visual C++.NET, in C++, under Windows. Using the add-in provided by the Visual MainWin SDK, the code is transferred to the Unix or Linux server running the MainWin software. Visual MainWin translates the code, then compiles and builds the software. That process covers everything from dealing with incompatibilities between Visual C++ and the ANSI-ISO standard version of C++, to supplying the functionality found in files such as windows.h and afxwin.h—which aren't to be found in a Unix environment—and supplies Windows runtime technologies.

Mainsoft (www.mainsoft.com) licensed the Windows source code from Microsoft and has already ported much of it to Unix. As a result, it doesn't have to reverse-engineer answers to the typical migration problems caused by so many Windows components that are "missing" in Unix, and developers can use the same APIs with Unix as they do with Windows.

Peel claimed that to the degree a developer sticks to Windows standard components such as the MFC libraries, the port can be nearly pain-free and close to immediate. Problems are most likely to occur where the developer chose an alternate route to solving a programming problem. Realistically, Peel estimated, one in 10,000 lines of code needs to be changed manually.

The current version does not yet support Web services; a SOAP toolkit is scheduled for release in the fourth quarter of this year, and the company says it will ship a Unix-compatible ATL Server in Q2 2003. ATL Server is a feature of Visual Studio .NET that allows C++ applications to be exposed as Web services. MainWin 5 pricing starts at \$12,500 for up to four developers, plus additional costs for runtime licensing. ■

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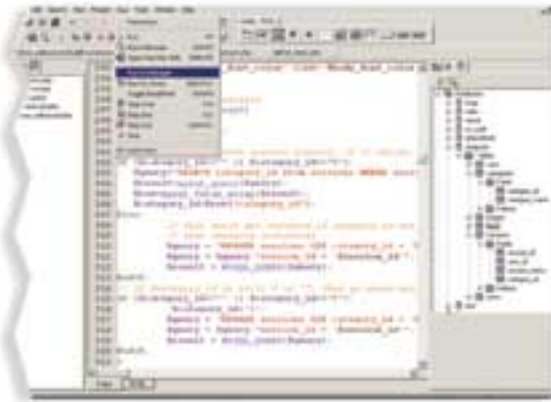
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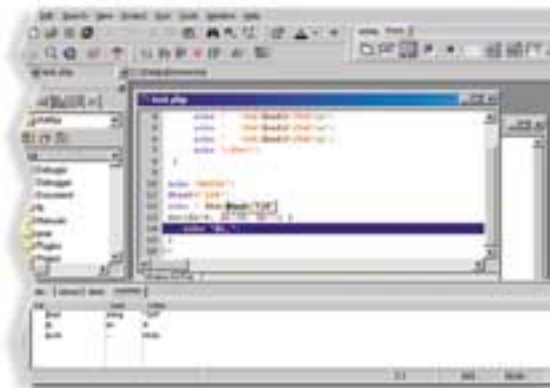


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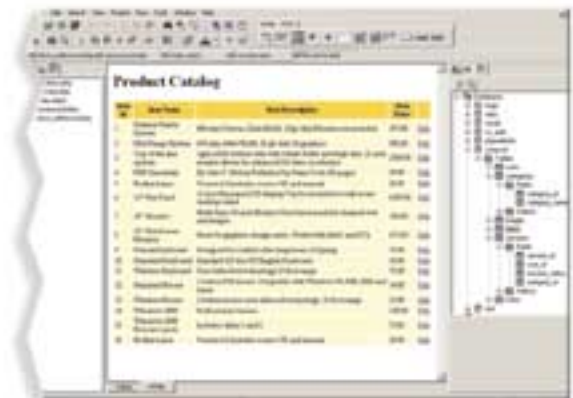
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LinuxWorld: A Coming-Out Party

BY ANDREW BINSTOCK

SAN FRANCISCO — Linux historians will remember the LinuxWorld trade show held the week of Aug. 12 here at the Moscone Center as the moment when Linux officially lost the moniker of "upstart."

Keynote addresses by Sun's Scott McNealy and Oracle's Larry Ellison established in dramatic fashion that Linux is here, here to stay, and destined for the enterprise. If that message was not completely understood and recorded, then surely the presence of a Microsoft booth on the show floor provided the clincher.

For veterans of the Linux circuit, however, it was not the keynotes or Microsoft's presence that made the deepest impression, it was the nature of the vendors exhibiting. Mostly, they were server vendors; big ones like **Dell Computer Corp.**, **Hewlett-Packard Co.** and **IBM Corp.** offering large high-end server boxes, and smaller companies, such as **Penguin**

Computing Inc., that offered custom-made hardware solutions built on AMD and Intel configurations of every conceivable mix. **Intel Corp.** also had a large presence, touting the value of its IA-32 and IA-64 processors for running Linux.

Barely present were the embedded Linux vendors that dominated the show last year. Almost completely absent were the innumerable merchants of programming tools and free-ware distributions who ruled the trade show for years.

Among the 20,070 attendees, the zealot/evangelist faction was in serious decline. The most radical thing occurred when **Red Hat Inc.** CTO Michael Tiemann led a small knot of demonstrators on a banner-waving march to City Hall on behalf of a proposed measure that would require the city of San Francisco to purchase only open-source software. The fact that Tiemann could roust only about 30 partic-

ipants of the show's claimed 15,000 attendees spoke volumes for how much the Linux community had changed.

The big announcement from **Sun Microsystems Inc.** was that it would load some of its low-end LX-50 Intel-based servers with Sun Linux 5.0, the first incarnation of its own Linux distribution based on Red Hat's version 7.2, along with J2SE, Sun ONE ASP for Linux, the Apache Web server and Tomcat JSP engine and MySQL database. Sun also said that it would soon ship a new version of Solaris for the x86 processor.

Microsoft Corp.'s presence consisted of a small booth, which was widely touted as the first step in establishing a dialogue between Redmond and the Linux community. There was not much for the Microsoft staffers to say or talk about, since the product they mostly featured was their Windows Services for Unix. Most Linux aficionados paid no attention.

Elsewhere on the floor, the Linux distributions from Mandrake, Red Hat and SuSE Linux AB were officially certified as being compatible with the Linux Standard Base (LSB) by the **Free Standards Group**, one of several groups seeking to establish a basic configuration for Linux. The LSB certification process prescribes the configuration of a variety of features, such as minimal packages to include in the distributions.

Also at the event, **United-Linux**, a vendor consortium encompassing SuSE, Caldera, Conectiva and Turbolinux, announced that it is beginning a closed beta of its commonly constructed Linux distribution, with a public beta expected to begin before the end of the third quarter of 2002.

Borland Software Corp. demonstrated Kylix 3, which after years of being an IDE for Object Pascal (the language under Delphi on Windows) now supports C++ development. This is one of the first

high-end IDEs and RAD tools to support C++ on Linux.

LTrix Engineering, based in Washington state, announced it had lice—that is, a new remote debugger for kernel hacking. Its intended audience is developers working on embedded systems and device drivers.

Trolltech AB previewed version 3.1 of its interface library, Qt. This edition sports a new aspect that enables interaction with ActiveX components, better Macintosh integration and enhanced support for multithreading.

Beyond these tools, there appeared utilities in a category not customarily seen on Linux systems: anti-virus packages. **Trend Micro Inc.** and **Sophos** were both there touting their wares—arguably indicating that if Linux is now sufficiently prevalent to be worthy of virus-writers' attention, then it truly has arrived as a mainstream platform. ■

Andrew Binstock is a regular columnist for SD Times.



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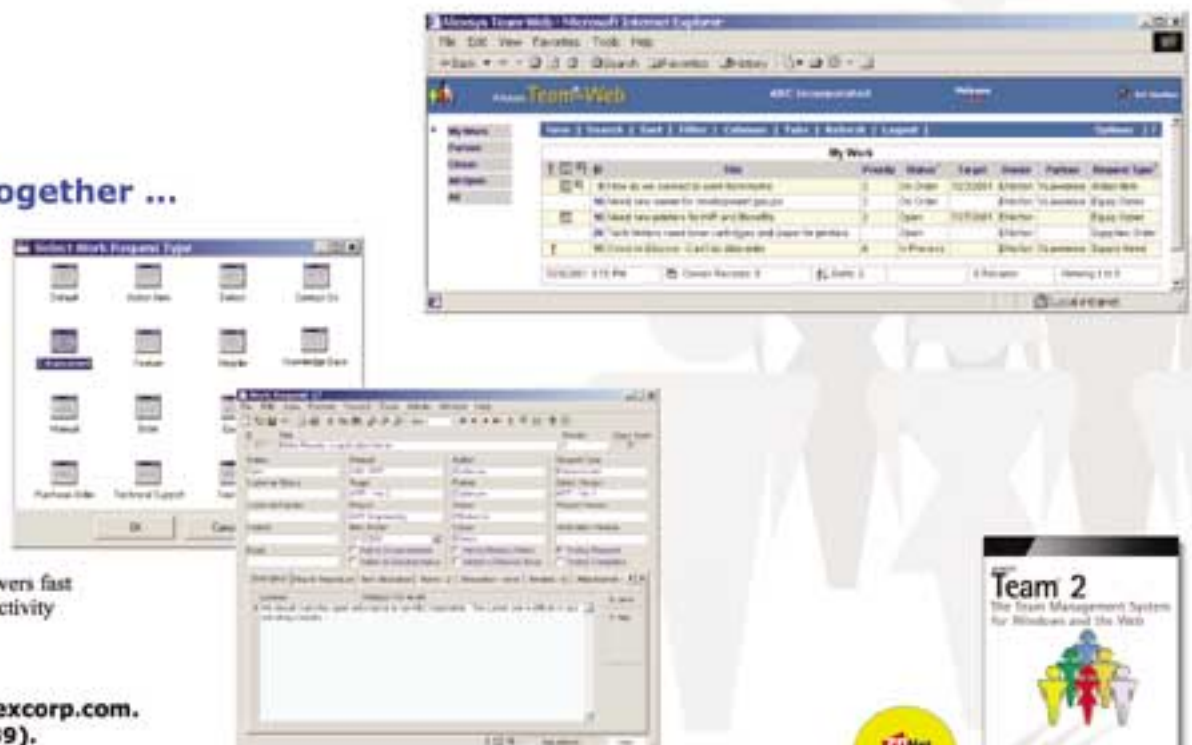
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News Briefs

MORE PRODUCTS

< continued from page 6

Component One Studio for .NET. These components include a set of menus and toolbars; a suite of data-aware input controls; and a DBList and DBCombo controls, which let end users browse and view data in a tabular format . . . Accelerated Technology, a division of Mentor Graphics Corp., has released a real-time kernel-aware plug-in for its ARM RealView Debugger. The plug-in, called **Nucleus Plus MTD**, is provided as a DLL for the RealView debugger, and costs \$1,295 per developer seat . . . **RUP4STP** is a new plug-in for Rational's Unified Process from Venture Financial Services Group Ltd. The plug-in implements Straight Through Processing capabilities with RUP; STP is a technology initiative within the financial services industry . . . SlickEdit Inc. has shipped its **Visual SlickEdit** code editor for IBM's mainframes running Linux, for \$599 per user. The company has also pledged that it will produce an Eclipse-compatible version of SlickEdit by early 2003. In addition, the company has released an OEM version, which includes APIs and libraries that allow OEMs to integrate Visual SlickEdit's editing window into their applications . . . Telelogic AB has announced that its **Synergy 6.2** change-management software, as well as the ActiveCM configuration-automation plug-in for Synergy, are now interoperable with Visual Studio .NET . . . Convera Corp. has updated its **Visual RetrievalWare** search and retrieval SDK for images and video. Version 5 now adds support for the PCX, TGA and XPM file formats, and includes new algorithms for video clip indexing. The software now also runs on Darwin, FreeBSD and NetBSD, in addition to Linux, Solaris and Windows . . . Texas Instruments Inc. has released a set of 70-plus third-party DSP algorithms for its **OMAP5910** application processor, which was announced in early August. The chip includes both a DSP and ARM-compatible processor core . . . Gran Ltd. has released version 1.5 of its browser-based **Gran PM** defect-tracking system as open-source software using its own license. The current version of the software, Gran PM 1.6, which adds support for BEA's WebLogic 7.0 app server and Sun's JDK 1.4, is available only as a binary for \$345.95 for up to 100 users.

PEOPLE

Vitria Technology Inc. has hired **Sam Mohamad** as president of worldwide operations; he was previously president of worldwide sales and field operations at Exodus Communications Inc. . . . Flashline Inc. has hired **Cathy Lippert**, most recently VP of product management at Compuware Corp., to serve in the same role at Flashline. The company also promoted its CFO, **David Inglis**, to president and COO. Founder **Charles Stack**, who had held those titles, remains CEO . . . Informatica Corp.'s president and COO, **Diaz Nesamoney**, has resigned "to pursue other interests," according to the company, and has also left its board of directors. Informatica's CEO, **Gurav Dhillon**, will assume the titles . . . Progress Software Corp. has named **D. Britton Johnson** as chief strategy officer for its PeerDirect Co. subsidiary. PeerDirect sells e-business data replication tools. Johnson is a co-founder and CTO of NuSphere, another Progress subsidiary.

STANDARDS

The **HR-XML Consortium**, which is creating a data schema for human resources applications, has updated its benefits enrollment specification to version 2.0. The new release focuses on tier-based and rate-based benefits coverage . . . The W3C released **XHTML 1.0 Second Edition** as an official recommendation. This update of the Extensible HyperText Markup Language corrects errors and reflects new work within the HTML Working Group. The group also released **Cascading Style Sheets TV Profile 1.0** as a candidate recommendation, **XFrames 1.0** as a working draft, **XHTML 2.0** as a working draft, and **Cascading Style Sheets Level 3** as a last call working draft. ■

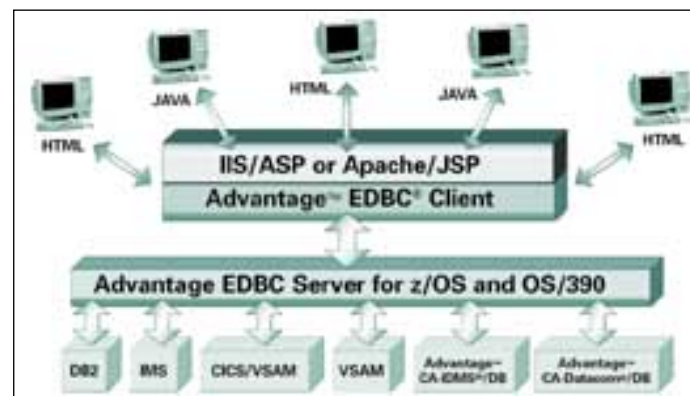
CA's Advantage: Read/Write To Mainframe With JDBC, ODBC

BY ESTHER SCHINDLER

Establishing data integration between mainframe and distributed Web applications is an awkward situation, at best. A company either relies on imperfect manual processes, or it chooses a piecemeal solution that works with only one vendor's products. Computer Associates International Inc. aims to address those problems with its release of Advantage EDBC 1.1, which promises to provide standards-based read/write access to host-based data using JDBC and ODBC interfaces.

According to the company, Advantage EDBC creates a single common SQL-based interface to mainframe data, providing transparent access to disparate—and even nonrelational—data sources. The software, which runs on mainframes and allows for clients on a variety of operating systems, lets developers use SQL to read and write data residing in IBM's CICS/VSAM, DB2 and IMS databases, or Computer Associates' own Datcom and IDMS databases.

Using Advantage EDBC enables corporate developers to



CA's EDBC server and drives can be deployed in a three-tier application.

focus on their discrete skills, claimed Maurice Donegan, CA's brand manager for the product. To the Web developer, interacting with the mainframe data is just like using any other JDBC or ODBC data source. Mainframe programmers can continue to use the integrated environment they're familiar with, Donegan explained, and developers need not worry about breaking unwieldy custom-made interfaces—much less creating new ones.

Significant in this version is support for Linux and z/OS, as well as for Windows 2000 and Windows XP. The new version is also compliant with JDBC 2.1,

and offers enhanced security features, and improved fault-tolerance, performance and scalability, according to the company.

The Advantage EDBC server component runs on the same mainframe as the target host database, and acts as the connection point for the clients. It also provides a set of common services to data access agents that connect with the target DBMS, translating it into the correct dialect if necessary. When the mainframe data is nonrelational (such as with IMS or VSAM), the server translates inbound SQL series into native I/O requests appropriate for the target database. Advantage EDBC supports target database server storage procedures, so static SQL programs can be invoked, while native database security, optimization, logging, full rollback and recovery remain intact, and are administered by the native system.

Donegan said that CA expects this tool to replace custom-made manual procedures, rather than displace other vendor tools. Most manual procedures rely on moving data to and from the mainframe with tools like ftp, but that's often a batch process, and it may rely on data extracts. As a result, information can get out of sync. "Advantage EDBC eliminates data latency," claimed Donegan. "It reads and writes the data right to the mainframe. Everybody's on the same page, again."

Advantage EDBC's server component runs on MVS/ESA, OS/390 and z/OS. The ODBC/JDBC client runs on Linux, Unix and Windows. Pricing starts at \$50,000, plus a tiered service charge. ■

Oracle Releases Linux Cluster File System

BY ALAN ZEICHICK

San Francisco — Continuing its aggressive push into Linux, Oracle Corp. has released a cluster file system as open-source software.

"This [file system] allows customers to manage clustered databases, based on Oracle9i, much more efficiently and simply than ever before," claimed Robert Shimp, vice president of database marketing. "We're making it available as open source using the [GNU] General Public License process. That means that any developer can use that source code freely; they just need to make available all their edits and improvements for others to use. We will be shipping that cluster file system with our Real Application Clusters product as a free bundle."

The file system includes a

device driver for allowing Linux to use and manage the physical drives formatted with that file system. Previously, according to Oracle, the database had to be installed on raw disks, which the company claims was less efficient. The file system drivers also are available for download from Oracle's Web site. Shimp said that the initial version of the code will be for developers. "We'll be having a production release in mid-October."

Separately, Oracle will be partnering with Dell Computer Corp. to offer a server appliance, said John Magee, vice president of application server marketing. "Dell will now be reselling Oracle9i application server preconfigured on their servers, on Red Hat Linux." The pricing model for those servers was not available at press time. ■



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XAware Brings XA-Suite for .NET to Table

.NET version facilitates integration; includes WSDL generator for the creation of Web services

BY CHRISTINA M. PURPI

.NET developers can now integrate data from disparate information sources using XA-Suite for .NET, XAware Inc.'s

data integration product.

XA-Suite's integration server, included in the suite, allows developers to create a single view of a customer, without

having to create connections to multiple systems, according to Kirstan Vandersluis, founder and CTO of XAware (www.xaware.com). He explained

that instead of connecting the applications to every external data source, an app developer can make a single connection to XAware's iServer. That serv-

er, in turn, goes out to the external systems, pulls the data, converts it to XML and passes it back to the application. "In other words, it makes many data sources look like one data source to the application developer," said Vandersluis, essentially making it all look like XML.

With the newly released .NET version, Vandersluis claimed, ".NET programmers can easily adapt to XA-Suite for .NET because it uses the same model and access data as in the ADO.NET data set; it's something developers are already familiar with."

The .NET version is available now and includes extensions for Visual Studio .NET. A key extension, according to Vandersluis, is its built-in WSDL generator, which allows users to create a WSDL file from an XML view, resulting in a Web service. "A developer would first create [one] XML view [that really represents a single business object] into many data sources, and then create the WSDL file which can then be imported into VS.NET."

XA-Suite for .NET manages the complexity of distributed data, while VS.NET gives developers access to the data using Microsoft's standard data model, ADO.NET, as a single business object, regardless of the number of original sources, claimed Vandersluis.

The .NET version also includes a drag-and-drop interface that helps to eliminate coding by dragging an XML element into the XML schema. Without the drag-and-drop interface, a programmer would have to know how to write the proper code for talking to the database and converting that data to XML, claimed Rohit Mital, founder and vice president of engineering.

XA-Suite for .NET would be included for current customers who have previously purchased a maintenance and upgrade package, according to the company. New customers would need to purchase XA-Suite for Windows; it ranges from \$15,000 to \$25,000 per processor.

Previously marketed as Avantio, XA-Suite also comes in a Java version. ■

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SoftIntegration Interprets C, C++, Targets RAD, Numerical Computing

BY ALAN ZEICHICK

Although C and C++ are generally treated as compiled languages, some programming applications lend themselves better to runtime interpretation. For such scripting and rapid-prototyping tasks, SoftIntegration Inc. offers Ch, its C/C++ interpreter, which the company claims offers all the benefits of scripting languages that boast of "C++-like syntax"—but uses the real C++ language instead.

The newest version, Ch 3.0, is compliant with the ISO C90 specification, according to the

company, and includes classes in C++. This version adds the C LAPACK library for solving simultaneous linear equations, and a number of the newer ISO C99 standard's features, including variable length arrays,

IEEE floating-point arithmetic, type-generic functions and complex numbers.

The interpreter runs on Linux, Unix and Windows, and is available in three versions: a free student edition; a

\$79 standard edition for non-student academic users; and a \$599 professional edition for commercial uses. The professional edition includes 2D/3D graphical plotting, computational array, the LAPACK func-

tions, and other high-level numerical routines not offered in the free versions.

The company (www.softintegration.com) also offers an add-in graphical library for \$299 per seat. ■

POWERBUILDER ADDS XML, JSP

BY ALAN ZEICHICK

Enhanced support for XML, JavaServer Pages and Web services will be the focus of Sybase Inc.'s updated PowerBuilder IDE, the latest version of which was released for beta testing in early August.

PowerBuilder is Sybase's multilanguage rapid application development tool, focused on targeting client/server, *n*-tier and Web applications. Version 9 is slated for completion in the first half of 2003, according to Sybase.

The company describes a number of new features in PowerBuilder 9, but most are focused on integration with XML and Web services, as well as increased support for Java. For example, in the first beta, applications built with PowerBuilder can now import data directly from XML documents, as well as save data in XML format. Sybase says that a later beta will provide the ability to publish and consume SOAP messages and WSDL files, providing a foundation for Web services.

While the PowerBuilder IDE (www.sybase.com/powerbuilder) runs only on Windows, and has historically targeted Windows or Sybase's own EAServer for application deployment, the company has strengthened the tool's interoperability with other platforms, such as BEA's WebLogic, IBM's WebSphere and Oracle's Oracle9i. It also adds the ability to build JSPs and Enterprise JavaBean clients.

Sybase has not yet unveiled the packaging or pricing for PowerBuilder 9. ■

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Browsersoft Offers Configuration-Oriented Approach

BY DAVID RUBINSTEIN

Consulting firm Browsersoft Inc. is about to launch its first product, based on its approach to Java-based component application configuration that the

company claims eliminates much of the hard-coding of relationships between the business components and data objects.

Called the eQ Foundation, the company's model-based

vision is to use XML to configure prewritten Java business components and to script the workflow, according to Don Grodecki, president of Browsersoft (www.browsersoft.com). The busi-

ness components can then be utilized in JSP/Servlet, Struts, Swing or EJB, as necessary through adapters or by scripts created with the foundation's scripting engine.

"This allows lower-level [developers] to make changes without having to have intimate knowledge of Java," he said. "People want business components neutral from the delivery technology. We provide adapters without core business logic and data tied to any technology. We take a bottom-up approach [to code generation], which is why we call it a foundation and not a framework."

The foundation is based on the Model-View-Controller architecture, with emphasis on the model side. At the center of the foundation is eQ Core, a business class that developers can create to implement business logic that also provides change tracking, error reporting, logging and messaging. "Customers create their own business object for their own domain. They build a Java bean, add attributes, and the rest is declarative," explained Robert MacIntosh, Browsersoft's chief architect for eQ.

In eQ Collection—a collection object that allows for one-to-one, one-to-many and many-to-many relationships—objects reside without relationships, which are scripted in later according to the application flow created in the model. "It solves a lot of problems for object-oriented guys in terms of creating relationships," MacIntosh said. "They can do it declaratively instead of hard-coding it. All you have to do is change a config file and have your relationships." The collection itself can also be treated as its own entity to be reused.

MacIntosh pointed out that while developers can benefit from scripting to create relationships, they can drill down into the code for customization if necessary.

Pricing is determined on a case-by-case basis, and the company indicated it will take on projects for a time as "proof-of-concept" projects. Browsersoft is working on a reference implementation called Parts Store—a Struts-based Web application that provides collect and retrieve operations, libraries and documentation. The full download of the foundation was to be available by the end of August, according to the company. ■

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 - Gregor Kiczales, from PARC
 - And others

James Gosling

Wireless Edge to Debut at SYS-CON Event

BY CHRISTINA M. PURPI

October's SYS-CON Media Inc.'s "Edge" Conference and Expo will host Wireless Edge, a new show dedicated to wireless development. The show also will include Web Services

Edge, JDJ Edge and XML Edge when the conference takes place in San Jose, Calif.

According to the conference organizers (www.sys-con.com), the Wireless Edge Conference was originally scheduled to take

place during the June show in New York, but was rescheduled to better accommodate key wireless industry announcements that were poised for the fourth quarter of 2002. Wireless Edge offers two new

tracks—Wireless Development and Wireless Hardware—with sessions that will address topics such as "Guide to Developing Applications with Micro Java," and "Building Secure Mobile Solutions."

Also at the event will be Java University, an educational conference produced by Sun Microsystems Inc., as well as four other conference tracks focusing on Java, Web services, XML and IT strategy. ■



CONFERENCE: Oct. 1-3
San Jose Convention Center
San Jose, Calif.

CONFERENCE HOURS:
Tuesday, 8:30 a.m.-4:30 p.m.
Wednesday, 8 a.m.-6 p.m.
Thursday, 8 a.m.-5:45 p.m.

EXHIBIT HOURS:
Wednesday, 11 a.m.-6 p.m.
Thursday, 11 a.m.-4 p.m.

KEYNOTES:
Tuesday, 1 p.m.-2 p.m., "Future of Web Services: Internal Vs. External Applications & SOAP," Kaj van de Loo, director of product strategy, SAP AG

Wednesday, 10:30 a.m.-11:15 a.m., Jonathan Schwartz, EVP, Sun Microsystems Inc.

11:30 a.m.-12:15 p.m., "Web Services Integration Technology for the 21st Century," Barry Morris, CEO, Iona Technologies Inc.

2 p.m.-2:45 p.m., "J2EE Development and Integration From a Web Services Perspective," John Magee, VP, Oracle9i

Thursday, 10:15 a.m.-11 a.m., "The Impact of Web Services on Wireless," Michael G. Maas, VP of marketing, IBM Corp.

11:15 a.m.-Noon, Keynote Panel

2:30 p.m.-3:15 p.m., "Web Services: Are They the Silver Bullet to Achieve Integration?" Eric Newcomer, CTO, Iona Technologies Inc.

www.sys-con.com
/WebServicesEdge2002West

DIJKSTRA

< continued from page 1

and the computer definitions of stack and vector.

In addition, Dijkstra was the first to propose that operating systems be designed as a series of defined processes. Separately, he designed and implemented the first Algol compiler, and authored a famous paper, "Go To Statement Considered Harmful," in 1968, beginning a debate that continues to this day.

Born in Rotterdam, Dijkstra was a professor of computer science in the Netherlands and at the University of Texas at Austin for much of his life, retiring only in 1999. He was known for his copious writings that were marked by great clarity of expression.

Dijkstra received the Association for Computing Machinery's prestigious Turing Award in 1972. An archive of more than 1,300 of his papers is located at www.cs.utexas.edu/users/EWD. ■

Defy Convention

Bug Tracking?

Be a Hero*

Date: Thu, 7 Dec 2001 23:58:38 -0800 (PST)
 From: [redacted] <[redacted]@[redacted].com>
 To: [redacted]@[redacted].com
 Subject: EXCELLENT JOB!!!

OK, you have defied convention. Each of the last 5 or 6 bug tracking system changes I have been through (going way back to [redacted]), has been a bigger piece of [redacted] than the last.

I have put off using this "ExtraView" as long as possible, figuring it would follow the same pattern all the previous "upgrades" have. Tonight I finally had to look at a few things, and I just dove in.

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GETTING CERTIFICATION

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An aerial photograph of a public square featuring a large, ornate fountain on the left. The square is paved with light-colored stone tiles and has several wooden benches. People are walking and sitting throughout the area. Two white circles highlight specific individuals: one in the upper left and another in the lower right. Two large white arrows originate from these circles and point towards the fountain. The text "GETTING FREE TRIAL CODE" is positioned near the top circle, and "GETTING FEET WET" is near the bottom circle. The IBM logo is in the bottom right corner.

GETTING FREE
TRIAL CODE

GETTING
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IBM

NEOCORE

◀ continued from page 1

this, when people are looking to dramatically reduce their costs."

Miles said that the company's emphasis is on a few vertical markets, such as pharmaceuticals, automotive and government. He's focusing on applications where developers don't have much advance knowledge of the sort of data that will be processed and stored, or where there's heterogeneous data that comes from many sources in many formats, or applications that have constant changes to the types of data being processed. "It's where [the data] just doesn't fit into a structured world of fixed rows and columns," he said.

"We believe it's time we did away with the waste of the IT system, where 30 to 70 percent of application development time and cost is in database design," continued Miles. "XMS's ability to leverage XML as it self-describes itself, and convert that into a self-constructing database, essentially eliminates that step." He added that because XMS basically indexes all material, not just specific fields defined as index fields, "we offer much broader access to all sorts of information, and provide the ability to drill down and drill around the information in a way that can't be done through structured and predefined indices."

XMS version 2.6 runs as a stand-alone database, and can communicate with applications using XQuery; previous versions were designed to be integrated into specific applications and used the XPath communications protocol, according to David Leeper, product marketing manager.

"With our earlier releases, we were in the container. We lived in iPlanet or BEA. There were advantages to that, but also substantial disadvantages, mainly in deployment," he said. "In 2.6, we have a stand-alone architecture that lets us be deployed within an embedded application or as a stand-alone server that would be connected to a J2EE server. That really allows us to be extensible and easier to deploy."

Leeper claimed the new version of the database has substantial support of the XQuery specification. "This allows a query to iterate over the data set. This is important in sorting, to allow people to discover and deliver the kind of information they

need for application development." Previously, he said, XPath was useful, but only as a one-way path for delivering a document as the result of a query.

Leeper added that for deployment, XMS is now available on Solaris 2.8, which is the company's first 64-bit platform. "We'll be moving to Itanium

with Red Hat Linux and Windows when those platforms become more prevalent," he said. NeoCore also includes an HTTP API interface, designed to simplify integration of XMS to portal applications. "This is pure HTTP and XML," he said, "but moving forward in our product plan, we will

deliver a SOAP interface."

Later this year, Leeper said, the company (www.neocore.com) will deliver database extract, transform and load capabilities within XMS, and will also provide the ability to validate data against a specific XML schema. Version 3.0, which he said will ship in the first quarter

of 2003, will offer hot backup, automatic growth and online space reclamation, and SNMP management support.

XMS 2.6, which was to be available in late August, is priced at \$995 per developer seat, and deployment is \$20,000 per 32-bit processor or \$30,000 for a 64-bit processor. ■

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Alan Zeichick, co-founder and editor-in-chief of SD Times and a columnist for Red Herring, began his career as a mainframe systems analyst and developer. Since 1984, he has written nearly 2,000 articles for dozens of technical and industry publications, and is in frequent demand as a speaker at such events as Comdex, NetWorld + Interop, PC Expo, Software Development Conference, IBM Technical Interchange, and JavaOne.



LARRY O'BRIEN

Larry O'Brien, founding editor of Software Development Magazine, has been described by software engineering legend Larry Constantine as "the best technical manager I've ever met." The well-read author of hands-on articles on leading-edge technologies, O'Brien recently served as lead architect for a series of J2EE-based Web services projects, and used the .NET Framework as the basis of his latest patent application. A popular instructor at development conferences, his latest book is "Thinking in C#."



ANDREW BINSTOCK

Andrew Binstock, principal analyst at Pacific Data Works, is an expert on technologies ranging from Web services to middleware to programming languages. Today, he works with corporate clients and contributes SD Times' Middleware Watch column; previously, he served as a senior technology analyst at PricewaterhouseCoopers, as editor of UNIX Review, and as founder of The C Gazette. His best-selling "Practical Algorithms for Programmers" is currently in its 12th printing.

www.wsdevcon.com

BPEL4WS

← continued from page 1

"To start solving the interesting business problems, you have to [specify] how to mix and match," Sutor said. "It goes from saying, 'This is the sequence in which I do a number of Web services,' or that certain compo-

nents need to succeed or fail as a group. With the specs, we're laying out the framework for how to combine and coordinate Web services together to accomplish a certain task."

Leading the protest against BPEL4WS is Sun Microsystems Inc.

Susie Struble, Sun's manager

of XML industry initiatives, said that while there is a degree of overlap between BPEL4WS and the Web Service Choreography Interface (WSCl) that Sun helped develop and bring to the W3C in June, she saw the move largely as validation of the need for such a specification. "The fact that IBM, Microsoft and

BEA have published something in exactly the same space means that the ideas we're thinking of are good and merited. And we'd love to see work get started with the W3C and to work with IBM and Microsoft in that venue."

On the other hand, Struble said she has become frustrated with the exclusionary practices

exhibited by some in the industry. "I'm tired of the politics. Sun put forth ideas on WSCI to help drive convergence of thinking. I'm tired of the way that IBM and Microsoft are 'leading the process' by having everything fully baked into their products and then publishing a specification that they will supposedly take later to a standards organization. Standards [should be] built on consensus." WSCI, released in August, has since been accepted as a technical note by the W3C and is now being considered for standardization.

But according to IBM's Sutor, WSCI simply didn't go far enough. "WSCI is really not complete, and only deals with how you describe what is to be done. What's missing is [the ability] to express the executable part of the workflow—the exact detail about how to accomplish getting the job done. [BPEL4WS] provides the execution details so you can run the thing."

FROM TWO TO ONE

Sutor described BPEL4WS as a combination of a pair of XML-based workflow modeling languages: XLANG, which Microsoft uses in its BizTalk server, and WSFL, the Web Services Flow Language that IBM uses in its WebSphere MQ middleware. "We're trying to bring together the strengths of both of those languages into something comprehensive."

So why not simply build the missing features on top of WSCI? John Kiger, director of Web services marketing at BEA, which also was involved in the development of WSCI, said the reason was one of vendor participation. "The driver is more one of industry convergence. Architecturally and designwise, WSCI is quite similar to BPEL4WS. However, the roots of BPEL4WS are more directly related to [Microsoft's] XLANG and [IBM's] WSFL specs. By the three companies working together, we have the opportunity to bridge what would otherwise be disparate standardization attempts that slow the industry down."

Kiger said that he doesn't see BEA's shift away from WSCI and toward BPEL4WS as a change of allegiance. "A better way to look at it is as acting as a bridge to bring the industry together on how to solve the problem of interoperability," he claimed. ■

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Wednesday, October 2

9:00-11:00: The Mechanics of Web Services: WSDL, UDDI, and WS-I

11:15-12:30: Enterprise Integration Technology Using Web Services

1:30-2:45: Tools and Frameworks for Building, Testing, and Deploying Web Services

3:00-4:30: Building and Deploying Web Services on Java/J2EE

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Nokia Kit Puts Media in Message

Mobile Internet Toolkit 3.1 supports MMS, XHTML, CSS, includes simulators

BY EDWARD J. CORREIA

Mobile phone maker Nokia Inc. has released Mobile Internet Toolkit 3.1, the latest version of its free mobile application development tools that now supports Multimedia Messaging Services, a form of instant messaging for handheld devices that can incorporate text with images, graphics, voice and sound.

MMS has been published as a standard by the WAP Forum (www.wapforum.org) and the 3rd Generation Partnership Program (www.3gpp.org).

Kelli Williamson, Nokia's business development manager, said the main advantage of MMS over existing technologies like WAP is its flexibility of data display. She described an example

of a push application: "As a business person, you might subscribe to stock quotes via MMS and throughout the day receive text and graphical messages showing how they are performing," she said, adding that although WAP also can display stock quote information with graphics, MMS gives developers more control over presentation. "The information is laid out differently [between the two]; you can be a lot

more creative with MMS than with WAP." Supported media file types include JPEG, GIF, text and AMR voice.

Another advantage of MMS, Williamson said, is the ability to

push data to devices. "With MMS, you as the end user don't have to do a lot of initiation yourself; the information comes to you if you've asked for it. With WAP, maybe you remember to [pull] your important information, and maybe you don't." More than static screens, MMS lets developers push interactive screens to users, Williamson said, which can be filled out in the field

and returned to a backend system, for example. "I saw a golf game in which players factor in distance to the hole, wind speed and direction when selecting their club and making a shot." That info is processed by a server with shot results returned to the player. "The same interaction can be applied to enterprise-type applications," she said.

While that might sound great in theory, currently there are no U.S. carriers offering the service, which requires the addition of Multimedia Message Service Center (MMSC) software to a carrier's network. "There are operators in Europe that have commercially released MMS [systems], and we are in trials in the U.S. with operators," Williamson said.



MMS messages combine graphics, text and sound.



Nokia claims that XHTML and CSS help to create portable user interfaces.

But according to Lee Wright, director of global developer marketing and Web initiatives at Nokia (www.nokia.com), MMS is a natural successor to Short Message Service (SMS) and an appreciated evolutionary step for developers. "In Europe, many developers who had been doing SMS development are moving over to MMS, and it has received a warm welcome by consumers. We think MMS will open up important opportunities for developers in the U.S. as it did for Europe and Asia."

As for backward compatibility with SMS, Nokia offers some with its Multimedia ter-

restrial Gateway software, an option for carriers. It works by storing MMS messages destined for non-MMS phones on a Web page and sending the URL as an SMS message.

Available now at www.forum.nokia.com/tools, the Mobile Internet Toolkit 3.1 includes the ability to create a Synchronized Multimedia Internet Language (SMIL) file for each message, which describes how the message needs to be displayed. Also included is a PC-based simulator of a Nokia MMS-enabled phone and Nokia's Mobile Browser 3.0.1, which now supports XHTML and Cascading Style Sheets. ■

ELF, ELF2, Fingertip Reference Platforms Have Linux in Hand

BY EDWARD J. CORREIA

When users start tossing out their Windows discs in favor of Linux, it's a pretty strong indication there's an audience for the latter. Hardware maker InHand Electronics Inc. took the hint last month when it released InHand Linux and announced that it will now "officially" support the open-source operating system on its ELF, ELF2 and Fingertip StrongARM-based embedded reference designs.

According to Andrew Girson, CEO of InHand (www.inhandelectronics.com), a substantial Linux community had sprung up around InHand's products even though the company did not officially support Linux. "If they were willing to do it themselves, our customers could put Linux on our platform and we would give them some degree of support," he

said. "Now we've hired a staff and have done a port of Linux to create a version that we want to offer and support."

InHand Linux, which was scheduled to be available at the end of August, is based on version 2.4.7 of the Linux kernel and will be available for all of the company's designs, which Girson said are used mainly in military, health-care and instrumentation markets. "In our space, Windows CE and Linux represent about 90 percent of the demand," he said, adding that in his experience, Linux edges out Windows CE in speed-to-market. "Linux's big advantage is that it's open source, and therefore getting the operating system up is pretty straightforward. For instance, we got ours up in about a month," he said. With open source, debugging also is easier, he claimed.

While royalties also are a factor when deciding between Linux and Windows CE, Girson said pricing of the development kits themselves is the same regardless of the operating system. For a starting price of \$3,000, developers receive a reference board, an LCD display with a stand, cables and a power supply, plus a CD-ROM with either Windows CE or InHand Linux and six months of support. ■



The Fingertip reference platform

FOUR J'S TAPS INTO TRANSPORTATION GRID

BY EDWARD J. CORREIA

Anyone who has waited for a bus knows how frustrating it can be, particularly when the system runs late. Infocell Telecom Ltd. is attempting to change that with Centurion, a system that displays real-time location data about public transportation vehicles, enabling travelers to minimize waiting time. Now in London, the system may soon be coming to major U.S. cities.

What makes this significant news for developers is the Business Development Suite, a rapid application development environment built by Four J's Development Tools Ltd. (www.4js.com) that makes Centurion's data available to their applications.

According to Aubrey Thompson, CEO of the Dublin, Ireland-based Infocell ([cell-telecom.com\), Centurion is being considered by the municipalities of Atlanta, Chicago, Tampa, Fla., and Sacramento, Calif. "It's really attacking urban management. It allows applications to be developed on top of it to add value to the whole process," he said. Vehicles may include buses, long-distance and commuter trains, and trams.](http://www.info-</p>
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Gordon Young, vice president of Four J's Europe, Middle East and Africa divisions, described a few of the applications that will be the first to emerge. "It will provide people in shopping malls, offices and on the street with accurate and predictable information on their cell phones or PDAs about when the vehicle is going to arrive."

Young envisioned all manner of location-based applications, which, at the moment, include

mainly advertising. "When a bus draws near a McDonald's, for example, an advertisement could appear." Young said that an application being considered by British Airways might help the airline determine if potential passengers might arrive late for flights. "If there has been a problem on one of the highways, they can pick that information up and reschedule accordingly," he said.

Currently, Four J's Business Development Suite offers the only way to access the system, which according to Thompson stores its data in IBM's Informix or Oracle databases. BDS costs \$5,000 per developer seat plus a concurrent end-user runtime license, which is negotiated individually per project. Prices for access to the transport grid data are determined by the municipality. ■

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The Training Value Proposition

Upgrading your team's skills without downgrading your department's budget

BY ALYSON BEHR

It's a never-ending battle: As soon as developers have mastered and adopted the latest technologies, the paradigm shifts again. As new development technologies and methodologies emerge, developers are forced to again weigh the benefits and downsides of migration to these technologies. Not the least important of these issues is the time and financial cost of training a development staff to bring them up to speed.

Add to the equation the continual challenge of delivering projects on increasingly aggressive timelines with paltry funding, and there is seldom a clear-cut solution. Managers' options include holding off on deployment of new technologies and building projects based on the current skill sets of their developers, training a few of their key people, or expecting the staff to just pick it up.

Other viable options for some project profiles are hiring new developers who already possess the training or certifications that managers are seeking, or outsourcing the project to consultants who then work on-site as part of the team.

Large platform vendors such as IBM Corp., Microsoft Corp. and Sun Microsystems Inc. obviously have significant motivation to provide incentive to enterprise managers to adopt the new platforms; however, they also are taking a pragmatic view by continuing to include support and training for existing platforms in their educational services offerings, at least for the time being.

Rick Bunzel, general manager for Sun Certification, said, "We're getting ready to release the next versions for Java 1.4. For the first time in the program, we're going to keep the former release, Java 1.2, for a period of time." The idea, according to Bunzel, is to maintain support for longer-term projects already under way on 1.2 with managers who don't want to transition to 1.4. He said Sun will be monitoring demand, and when it sees a drop-off in 1.2 enrollments, it will curtail the offering.

With all the buzz surrounding .NET, Microsoft is under pressure to deliver



real projects that prove its viability as an enterprise development platform. To address the need, Microsoft is launching a new certification and updating its existing development program.

Juan Fernando Rivera, director of the content development and delivery group at Microsoft, said, "Specifically for .NET, we're launching the Microsoft Certified Application Developer (MCAD), with exams available in September of this year, as well as updating the Microsoft Certified Solution Developer (MCSd) for .NET in Q1 of 2003. The MCSd is more targeted toward architects, and the MCAD is targeted toward software developers. We estimate that there are five to six developers per lead, so the possibilities for MCAD are huge."

Michael Kropp, general manager of patterns and practice development at Microsoft, added, "In addition to the new program, we are investing heavily in a number of assets that are free to developers," including reference applications, architectures and documents that will be available off Microsoft's site.

No matter the incentives, development managers have to look hard at investing in new platforms.

Mike Sundermeyer, senior vice president of engineering for Macromedia Inc., maker of Web authoring tools Dreamweaver MX, Fireworks MX and Flash, among others, said his division of desktop tools research and development is definitely not adopting any new platforms in the short term.

"The technology for building desktop applications hasn't changed significantly lately," Sundermeyer said. "Take Mac OS X, for example, that came out last year in the middle of a product cycle. Apple wanted to have us build on the Quartz interface, a new interface for building rendering APIs, but it wasn't good timing. Now that we've shipped our MX versions of products, we'll sit down and look at new technologies and decide what's appropriate."

Sundermeyer added that technologies they're considering are Quartz and OS X on the Mac side. "We've built the knowledge internally to carbonize our application," he said.

Sundermeyer's approach to training his people is to send a few integral staff

members to organized technology-specific seminars. "We sent a key engineer or two on each product to spend a lot of time at the Apple Developer Kitchens," explained. "Apple sponsored a set of kitchens that were informal conferences where developers brought their applications in and sat in a room with experts and just [developed their] applications at Apple."

These developers went back to Macromedia and built up a set of documents and components and then taught the rest of the engineers.

Jay Johnson, co-founder and managing director of Tier 1 Innovation, said his company also frequently relies on mentoring for its 30-seat development department. "Typically we send our people to targeted training," Johnson said. "Some of the developers will pick things up from books and they tend to do that naturally, but it depends on the technical level, and we don't expect them to do their learning that way."

IN DEMAND

With many development managers like Sundermeyer and Johnson using the

► continued on page 26



Macromedia's Sundermeyer doesn't think a certification is that important.

TRAINING

◀ continued from page 25

mentoring technique to meet the call to upgrade or add skill sets, vendors are looking to provide the basis for that process through their certification programs and point to enrollment trends.

According to Rivera, Microsoft is seeing about an even split between Web and Windows development. By comparison, Bunzel said Sun's most popular certification is Programmer because it's the entry-point prerequisite for the balance of the company's Java certifications.

Bunzel added, "Enrollment is pretty evenly divided between Web Component and Programmer." He said that Sun is seeing program growth and believes that the reasons for this are twofold, noting that "developers want to differentiate themselves in the job market as well as realize the income growth they'll see from attaining a Java certification."

BLENDING LEARNING: THE NEW FLAVOR

Gone are the days of an entire development team heading out for a week of Marriotts and margaritas with their training course. Corporate budgets can't and won't support the downtime. As a result, a leaner, more hybrid method of training called blended learning is emerging that is gaining favor with development managers and platform vendors.

Blended learning combines a variety of training methods such as classroom instructor-led learning, Webcast and CD-ROM. It also can be developed to include preclass preparation, lab experience, refresher courses and pre-exam testing prior to certification. Development managers like it because it costs less, may be less time-consuming

and, in some cases, leaves the developer with better residual references. Platform vendors are providing these programs because it gives them an added revenue stream and increases the chances that more companies will adopt their newest platform iterations sooner.

Bernie Mihalek, director of Sun's Information Technology Organization Segment, said, "We have started packaging up some of our Web courses and instructor-led classes without the certifications. Going forward, we are working on prescribing soft skills that might apply. For example, if you're a Java architect, you might have to define business requirements, which requires that you apply business skills like project management and maybe even conflict management."

VENDOR CERTIFICATION VALUE

Since vendors are packaging courses minus the certifications, it's fair to question how critical they are to the development manager.

Macromedia's Sundermeyer doesn't think a certification is important. "Other than as an indicator that this person may have really spent the time to sit down and learn it, we're more interested in an applicant who has domain knowledge," he said.

Macromedia breaks up interviews into a few different segments, he explained. "There's the people and culture fit, the passion and domain expertise and the technical fit," he said. "During the technical portion, interviewers will send the interviewee to the board to solve a problem."

On the other hand, Tier 1's Johnson relies heavily on the certification process for training for the majority

of his development team. "One of the core requirements at Tier 1 is that all of our consultants must be Seybold-certified. They must be certified in the technology that they're implementing, so certification is paramount. There are



Most training tuitions are corporate-funded, says Microsoft's Rivera.

a number of what for us are ancillary technologies like Java, VBScript, XML and CORBA, and we do send our people off to be certified in those areas, in particular if they're going to be working on a job that requires that they know the technology," he said.

Johnson expects a certification when he sends one of his developers to training and said that this is a prerequisite to being employed. In addition, he said, "compensation is really not tied to certifications other than our core business."

WHO'S PAYING?

One thing's definite: Vendors aren't giving away their training courses, learning materials and certifications.

According to Sun's Bunzel, tuition can run from \$3,000 for the Programmer certification to \$10,000 for a third-party four-week Java boot camp. Microsoft rounds out the cost of the new MCAD certification at about \$6,000. On the other end of the spectrum, books are available for a pittance for most development platforms. But who's paying for it?

Microsoft's Rivera said the majority of tuitions are corporate-funded, adding, "We have companies that are looking at certifying about 3,000

people in the next few years."

Sun's Mihalek's opinion is compatible with Rivera's; however, Bunzel believes there are more individuals upgrading their skill sets at their own expense given the industry's current penchant for "right-sizing."

Even with education services playing a dual role, some vendors are not sure where the funds are coming from, claiming that while individuals may charge a personal credit card indicating that it's personally funded, their company may in fact be reimbursing them. In addition, it's difficult to track because people study toward certification in different ways and not necessarily through a vendor-led formal classroom procedure.

Sundermeyer said that Macromedia has an ample budget for training and utilizes formal training with another more holistic approach, which works well from a research standpoint as well.

"We send our developers out to meet with our customers. It's time-consuming, but the developer who really knows their customer can ask the right questions," he explained. "This information is much more valuable than if a product manager writes a spec and throws it over the fence for the developer to implement. This is a form of training that might typically not show up in an article, but I think it's the most valuable type of training there is: real-world experience with customers. It gives the developer a chance to own a part of the code and be involved in the project at a depth that they may not otherwise feel. It's even more important than writing C++ classes in the most efficient way. If you're not solving the right problem, it doesn't matter how fast your code is." ■

'JUST-PICK-IT-UP' TRAINING

"'Train them and they will leave,' was the unstated motto in enterprise development management circles a few years ago, but that's changed," said Steve Beauregard, president of Regard Systems Integrators. RSI's focus is on wireless solutions and custom Web services development for messaging and collaboration solutions. The company is developing products that will enable users to access information either from behind a firewall or over the Internet from wireless devices.

SD Times: From your position as a consultant, you undoubtedly see many development managers make staff training decisions. What training tracks are you seeing your customers take?

Steve Beauregard: I'm definitely seeing less training occurring than I have seen in past years. The trend is to essentially wait for the market to adopt a platform and then hire staff that have experience from other companies

rather than training existing staff.

Which of the emerging platforms are you seeing the most interest in?

Obviously, it depends on what type of application or project is going into development. Certainly Microsoft has put a strong marketing push behind .NET [and] everybody is clearly looking at that, although I don't think the adoption has been quite as fast as Microsoft might have thought.

Why is that?

A lot of people were burned by Internet Information Server [IIS] and the ASP code with a lot of the viruses that became prevalent and security holes that they had. I think managers would rather let someone else test .NET in the market before they adopt it.

Which new platforms and emerging technologies do you see giving .NET the most competition?

Some of the Macromedia products such as ColdFusion have gained ground. It's a pretty easy, out-of-the-

Steve Beauregard, Regard Systems Integrators

box solution for people to get Web applications up and going. On the larger end of the scale, Oracle's product line has found wide acceptance.

Are you seeing companies migrating to the new technologies and training their development people, or are you seeing companies maintaining the current development platforms and staff with only minimal training allocated for a very few?

I'm definitely seeing more of the latter. It seems more the norm to maintain the products and licensing they currently own. From where I sit, it appears that companies are really sick of the upgrade cycle. They are constantly having to change technologies and upgrade. For instance, there seems to be a new word out of Microsoft every 18 months: "Here's our new great dev platform." First there was Visual Studio that was going to bring the whole world together, and now we're being told that we need to migrate to .NET. I think, largely, everyone's tired of it. They want to develop on

what they've already made the licensing and training investment in that they know works.

When development managers are allocating funds for training, what types of training have you seen the most of?

A lot of "just pick it up" is pretty common these days. It's fairly prevalent among senior developers who tend to want to learn things on their own out of curiosity, and know that the depth of their knowledge base will affect their career. Online tools and documentation have improved to where most competent developers can glean what they need out of these sources. Another typically well-received type of training is the one-day seminar. These seem to be affordable both from a cost and time-served-off-site standpoint. Years ago you used to see developers go off for a full week of training. Those days are over for the time being.



—Allyson Behr

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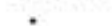
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EDITORIAL

Web Services Soap Opera

“General Hospital”? “Days of Our Lives”? “One Life to Live”? Heck, they’re nothing. If you want to see shifting alliances, temporary dalliances, backstabbing, betrayal, angst and anguish, nothing beats the Web services specifications drama.

In the latest episode, no sooner does one set of vendors, led by Sun and BEA, introduce its Web Service Choreography Interface, then a second group of vendors, led by IBM, Microsoft and BEA, brings out a roughly comparable competitor, the Business Process Execution Language for Web Services, or BPEL4WS.

At least soap operas are meant to be entertainment, pure and simple. These specifications tiffs are intended to be serious. But while the vendors spar with one another, enterprise development teams can only sit idly by, watching the sideshow. These vendors don’t have the best interests of developers at heart, nor do they care about the true evolution of solid standards that are broad enough to provide a solid foundation for future development. Instead, they’re vying for short-term advantage, hoping that the head start their coders have in implementing these standards will help them bring products to market quicker.

In other words, it’s all about time-to-market—the vendors’ time-to-market versus their competitors’ tools and platforms. The best interests of the development community, or of enterprise customers, doesn’t factor in at all. That’s why the type of specification development we’re seeing with BPEL4WS, WS-Inspect, WS-Coordination and WS-Transaction takes place in smoke-filled rooms, instead of in standards organizations like the World Wide Web Consortium.

Compare and contrast. With a true open specifications process, any organization, academic or individual is invited to participate. Specifications are vetted in the public view via drafts and open committee meetings. The rules regarding intellectual property and royalties guarantee that today’s specification won’t become tomorrow’s handcuffs.

In the world of a closed vendor-driven specification, the rules are entirely different. The only participants are major vendors carefully chosen, and all others are excluded. The scope and implementation of the emerging specification are kept confidential, to exclude comment from the larger software development community, until version 1.0 of the spec is thrust upon us as a *fait accompli*.

And press releases and statements fly in the trade press, with vendors either claiming that their competitors’ work doesn’t go far enough, or complaining that they were unfairly excluded from a key vendor consortium.

All this isn’t to imply that Sun’s WSCI specification is significantly more open than BPEL4WS. Sun and its partners, after all, only released it to the W3C after all the important work had already been done.

It’s one thing for vendor communities to have closed processes for developing their specific platforms, such as Java or .NET. But for vendors to keep mouthing the phrase “collaborate on standards, compete on implementation,” while drafting those standards in such an exclusionary manner, is disingenuous and dishonest. Even the stars of “As the World Turns” would be ashamed of such behavior. ■

LETTERS TO THE EDITOR

ORCHESTRATING SERVICES

David Rubinstein’s article about The Mind Electric [“Glue Holds Web Services Together,” Aug. 1, page 5, or at www.sdtimes.com/news/059/story5.htm] neatly summarizes the main features and benefits of TME’s main products, Glue and Gaia, and the founder’s motivation for creating them. It may be useful for readers to understand how these products stack relative to others in the Web services category, both from other start-ups and platform vendors.

For example, Web services divide into simple and complex Web services. TME’s products deal with simple services (synchronous, request/reply, RPC-style) where most vendors put their effort into. However, the real promise of Web services is in delivering complex Web services (asynchronous interactions, workflow/business process, document-style) where fewer vendors currently specialize, but where most business value is ultimately derived.

Doron Sherman
CTO
Collaxa Inc.

Editor’s note: Collaxa sells Web services orchestration software that competes against The Mind Electric’s solution.

MORE MDD, PLEASE

In response to Peter Young’s Guest View in the Aug. 1 issue [“MDA: A Better Approach To Development,” page 32, or at www.sdtimes.com/opinions/guestview_059.htm], I’d like to see more distinction between architectural design and the development phase.

Our company offers a development tool product suite that takes a Model Driven Development approach. While MDA has a great value from the architectural point of view and helps software architects, MDD empowers software developers to develop, deliver and maintain the applications.

The same spirit of reusability and automating the development process drives both MDA and MDD. When we talk about enterprise-level software projects, the architectural part is more important, and MDA is strong here. On the other hand, for small to midsize applications, the actual development is

the main effort, and MDD helps in this area. (It is not different from building a skyscraper versus a town house, and the role that architect and builder play in each.) However, we always face both sides at any software project.

MDA and MDD need to get more attention, and there would be a better chance for attracting more software architects and developers when we separate and clarify these concepts because architects and developers each have their own concerns. (Back to the above example: An architect’s design includes windows but probably not all the detail that the builder needs to know about them.)

Also it helps both the standard groups and the tool providers to make a better match, and make the overall process of software design and development more effective, reliable and affordable.

Arman Eshraghi
CTO and Founder
LogiXML Inc.

.NET IS NOT BETA

What in the heck is Steven Vaughan-Nichols talking about [“Letters to the Editor,” Aug. 1, page 33, or at www.sdtimes.com]

LETTER TO THE EDITOR

MICROSOFT ON BENCHMARKS

This letter is intended to correct factual errors contained in the response by Steven Vaughan-Nichols to a letter to the editor in the Aug. 1 issue of SD Times. The letter, from Mike Kikkert [“No True Comparison,” page 33 or at www.sdtimes.com/opinions/letters_059.htm], asks about the availability of “truly independent” comparative benchmarks between application servers provided by Microsoft Corp. and various Java vendors.

This is an interesting question, one which we at Microsoft are asked by many customers and which we see is of interest to readers of SD Times as well. This is an area in which Microsoft has been making an effort to stimulate debate and provide information, some of which SD Times has previously commented on.

In response to Kikkert’s letter, Vaughan-Nichols makes several statements that are inaccurate and should be corrected. The following excerpts are the specific inaccurate statements.

“Actually, the answer to that is very simple. There is no .NET server with which to compare numbers.”

Vaughan-Nichols seems to be confusing Windows .NET Server, the next generation of our Windows server operating system, with the .NET Framework runtime, available now for the Windows 2000 family of server operating systems.

“Microsoft’s .NET numbers are made up using beta software and more than a touch of wishful thinking.”

Microsoft publishes results comparing the performance of .NET with that of other platforms using released versions of the framework. See www.gotdotnet.com/team/compare for the latest information. The .NET Framework was released as production code in February 2002.

“No one else does it because it’s forbidden in the beta’s EULA, and Microsoft is sure to fall like a pile of bricks on anyone using its beta code for benchmarking purposes.”

The .NET Framework End User License Agreement

(EULA) (<http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dnnetdep/html/redisteula.asp>) allows the disclosure of benchmark test results with written permission from Microsoft. This type of clause is common across the industry, which is a point Vaughan-Nichols has made in past articles.

“Long story short: For your job, you really don’t have any other choice but to go with J2EE. I can’t imagine anyone, except companies with the closest possible ties to Microsoft, running core infrastructure programs using half-baked software—no matter what the benchmarks say.”

This is an opinion, and one that Microsoft disagrees with. We respect Vaughan-Nichols’ right to state his opinion; however, we think the rapidly mounting list of customers making significant technology and business impacts using Microsoft .NET technology would suggest that it may be time for him to reconsider.

In terms of J2EE and .NET benchmarks, industry-standard benchmarks, such as the TPC-C and TPC-W, do not current-

.com/opinions/letters.htm]? My friend, your information is way out of date.

Referring to your comments about .NET being beta software, the .NET Framework and Visual Studio .NET shipped in February and the numbers still stand. In fact, the benchmarks show the numbers increasing over the competitive products. Have you seen GotDotNet.com's benchmark with the .NET Pet Shop application?

Before you start spewing misinformation, you should get all the facts straight. Also, the .NET server you are referring to is irrelevant, as the .NET Framework runs on Windows 2000 (all versions) as well as Windows XP (it is also going to be supported, obviously, in the latest version, called Windows .NET Server). The benchmarks that were done for the .NET Pet Shop application were run on the exact same hardware as the J2EE benchmark.

Please read the supporting documentation and correct your mistake.

William J. Steele

Steven Vaughan-Nichols' response to Mike Kikkert, in the letters to the editor for the SD

Times issue dated Aug. 1 was inaccurate.

Mr. Vaughan-Nichols states "Microsoft's .NET numbers are made up using beta software and more than a touch of wishful thinking." Mr. Vaughan-Nichols should check the news more often. The .NET Framework was formally released in February, and is fully supported as a runtime on Windows 2000 Server. The benchmark results and kits published by Microsoft (www.gotdotnet.com/team/compare) utilize currently shipping Windows 2000 products and the .NET Framework.

It is true that the next release of Windows Server is not yet out. However, .NET is supported and is in wide production use on today's Windows 2000 Server.

Dino Chiesa

Microsoft Corp.

Steven J. Vaughan-Nichols responds: The column that Mr. Kikkert was writing about was published in a December issue of SD Times, and I interpreted his questions to pertain specifically to that column. At the time that column was written, the .NET Framework and Visual Studio .NET were beta code. The origi-

ly measure the relative performance of .NET vs. J2EE, in part because there have been no J2EE-based submissions for TPC-C or TPC-W. Instead, Sun, in conjunction with the major J2EE application server vendors, has created a benchmark called ECperf that unfortunately excludes Microsoft's participation because it allows only J2EE-based, Sun-certified application servers to participate. This has led people such as the reader to ask for such platform comparisons. We recognize this, and we have responded accordingly.

Microsoft undertook a project to port Sun's Java Pet Store reference J2EE application to .NET. We then benchmarked this application compared to Oracle's published results, replicating their test bed configuration and test scripts as described in Oracle's original benchmark white paper. The .NET Pet Shop application thoroughly defeated Oracle's Java-based results with a C# application that was coded with less than a quarter the amount of code of the functionally equivalent J2EE application. As with our Nile benchmark, we published

all source code, so customers can run the benchmark themselves and use the .NET Pet Shop as a reference application for their own .NET applications.

We hired VeriTest, an independent testing organization, to audit Oracle's and Microsoft's Pet Shop benchmark results. VeriTest's conclusions are published at www.gotdotnet.com/team/compare/veritest.aspx.

We conducted other benchmarks internally, which are posted there as well. We publish all code for these benchmarks and have encouraged customers to examine the results closely and even replicate the tests themselves. Furthermore, we have made every effort to work with independent sources, including Ziff-Davis, Doculabs and VeriTest, to ensure that the results are credible. And contrary to Vaughan-Nichols' comments, we have not used beta software in such tests; the tests have been conducted on shipping software that is readily available to customers.

We have actively participated in application server and database benchmarks conducted in several IT trade publications. We are ready and very eager to

nal version of the .NET Pet Shop versus Java Pet Store benchmark that I was referring to as "more than a touch of wishful thinking" was run using that beta framework. For an update on the benchmark situation, see my column in this month's issue, on page 33.

THE REAL UML

Great article ["Modeling Usage Low; Developers Confused about UML 2.0, MDA," July 15, page 1, or at www.sdtimes.com/news/058/story3.htm]. I'm glad someone is finally revealing the reality about UML.

Ben Ettlinger

Lead Data Administrator,
New York Power Authority
President, NYEMUG

WATCHING REDMOND'S 'STEP'

In reference to Oliver Rist's "A Step Too Far" [July 15, page 33, or at www.sdtimes.com/cols/winwatch_058.htm]: Here, here! At last, someone calling it like it is in a public space.

Kevin Trammel

Programmer Analyst
Marshall Medical

ANYSOFT, ANYONE?

I saw your Feb. 15 article on Anysoft ["Anysoft Tackles EAI

With App Abstraction," or at www.sdtimes.com/news/048/story7.htm], but I cannot seem to get in contact with the company. Have they gone out of business?

Peter W. Van Ness

Van Ness Group Inc.

Editor's note: We were unable to make contact with Anysoft Inc. and approached the company's public relations agency, Fama PR, which we had last talked to mid-April regarding Anysoft's forthcoming Digital Cortex software. The agency advised that it, too, has been unable to make contact with Anysoft, and believes that the firm has laid off all staff and has ceased operations.

WHAT DO YOU THINK?

SD Times welcomes feedback. Letters must include the writer's name, company affiliation and contact information. Letters become the property of BZ Media and may be edited for space and style.

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ensure that the results are accurate and fully reproducible by customers. This would help SD Times readers get the information they need to make informed decisions from an independent source, and prevent inaccurate statements, such as those from Vaughan-Nichols, from appearing again.

Richard Burte

Technical Product Manager
Microsoft Corp.

Gregory Leake

Group Product Manager
Microsoft Corp.

Editor's note: The creation of an accurate and meaningful app-server benchmark would be a very expensive and resource-intensive undertaking, which is one reason why no independent organization has executed such a program. Another is that in this highly competitive marketplace, it would be unlikely that such a program would have broad vendor participation. However, SD Times would support an industrywide app-server benchmark initiative. Steven J. Vaughan-Nichols' take can be found in his Java Watch column on page 33.

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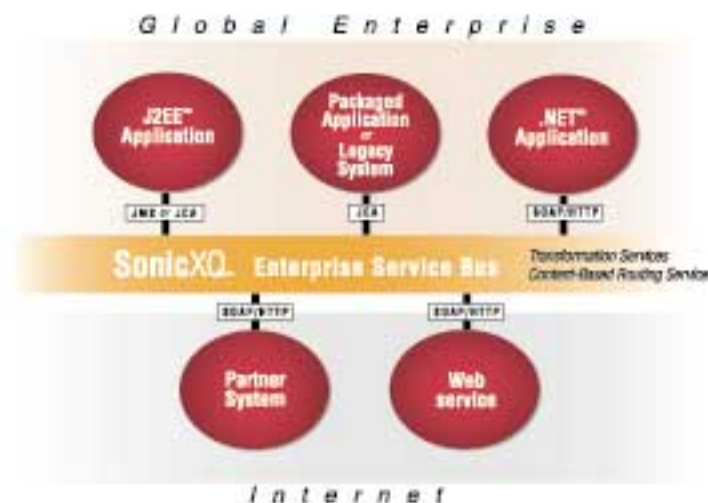
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IBM BUYS PWC: GOOD MOVE

On July 30, the world's largest vendor of middleware announced it had purchased the world's largest group of middlemen. Yes, IBM bought Price-waterhouseCoopers' technology consulting arm for the rather unprincipled sum of \$3.5 billion. The popular press immediately described this as further evidence of IBM's wholesale transition to a professional services firm.

To justify this analysis, the press trotted out the same numbers that showed how profitable services had been for Armonk during the previous 18 months and talked of the mandate to continue in the direction of more services. Analysts recalled that Lou Gerstner was widely credited with seeing the value of these services and focusing on them. But the general view repeated frequently by the press that IBM is transforming itself into a services company is wrong.

Consider that on the day after the PwC acquisition was announced, IBM cut the ribbon on its new chip-fabrication plant in East Fishkill, N.Y. Mind you, this is not just a little foundry, but rather one that cost nearly as much as the PwC acquisition, and part of a \$5 billion commitment IBM made

two years ago to expand its global chip-making capabilities. It occupies 140,000 square feet and uses advanced fabrication techniques, many of which were developed by IBM. In this regard, I should point out IBM has been the No. 1 grantee of U.S. patents for years and years. Moreover, no sooner was the plant open, then IBM announced that it would move the foundry process to 90 nanometer (0.09 microns) manufacturing—another large investment—at its first opportunity.

Over the past few years, though, the real jewel at IBM has not been hardware or even services, but—surprise!—software. IBM's software unit sold \$13 billion of goods last year, making it second worldwide only to Microsoft and far bigger than Oracle. But even limiting ourselves to the portion of IBM sales that is databases, IBM passed Oracle last year as the top vendor of databases by market share. It did so on the basis of the \$1 billion purchase of Informix.

IBM also has roared back into the middleware space with a vengeance, and it's likely to surpass BEA in the

Java app server space this year. Meanwhile, of course, its complete domination of pure messaging middleware with MQSeries (now called WebSphere MQ) continues unabated. It's also the world's largest consumer of Java and the largest Linux vendor.

So, you tell me: Having made a greater investment in chips alone than it did in PwC, and having reinvested in software, where it now dominates nearly every category it competes in, does IBM really look like a company that's trying to transition itself into a services firm?

Sure, IBM bought PwC to expand its consulting and services prowess. But bear in mind that PwC was dirt cheap: In early 2000, HP wanted to buy the same consulting practice for \$17 to \$18 billion, but IBM snatched it up for a quarter of the price. (Such is the downdraft caused by the Internet bubble and the taint of Andersen Consulting.) While some of PwC's client engagements will surely disappear because the clients are firms that compete with IBM, you cannot escape the fact that IBM struck a heckuva deal. And because this deal fit with IBM's larger goal of increasing services revenue, it became especially attractive.

A wag once commented that a bargain is something you didn't realize you wanted until you saw how cheap it was. With this deal, IBM got a superbargain: a very good price for something it wanted and didn't want a competitor to have. And it acted quickly once it got all the pieces lined up. The acquisition is not part of a redefinition of IBM's mission; it simply supports the same three-legged stool IBM has been building for a long time: hardware, software and services. That two legs are picking up some of the profit that the hardware leg can no longer produce is simply part of the validation for having three legs—a strategy, incidentally, that no other company today has been able to pull off successfully. Not HP, not Sun, not Dell.

The move is sure testimony that IBM's new CEO, Samuel Palmisano, is willing to carry on the strategy set by his predecessor while implementing it through bold, effective, even wise, moves. ■

Prior to joining Pacific Data Works LLC as principal analyst in 1998, Andrew Binstock was a senior analyst at Price-waterhouseCoopers, where he was in charge of the firm's global technology forecasts. He can be reached at abinstock@pacificdataworks.com.

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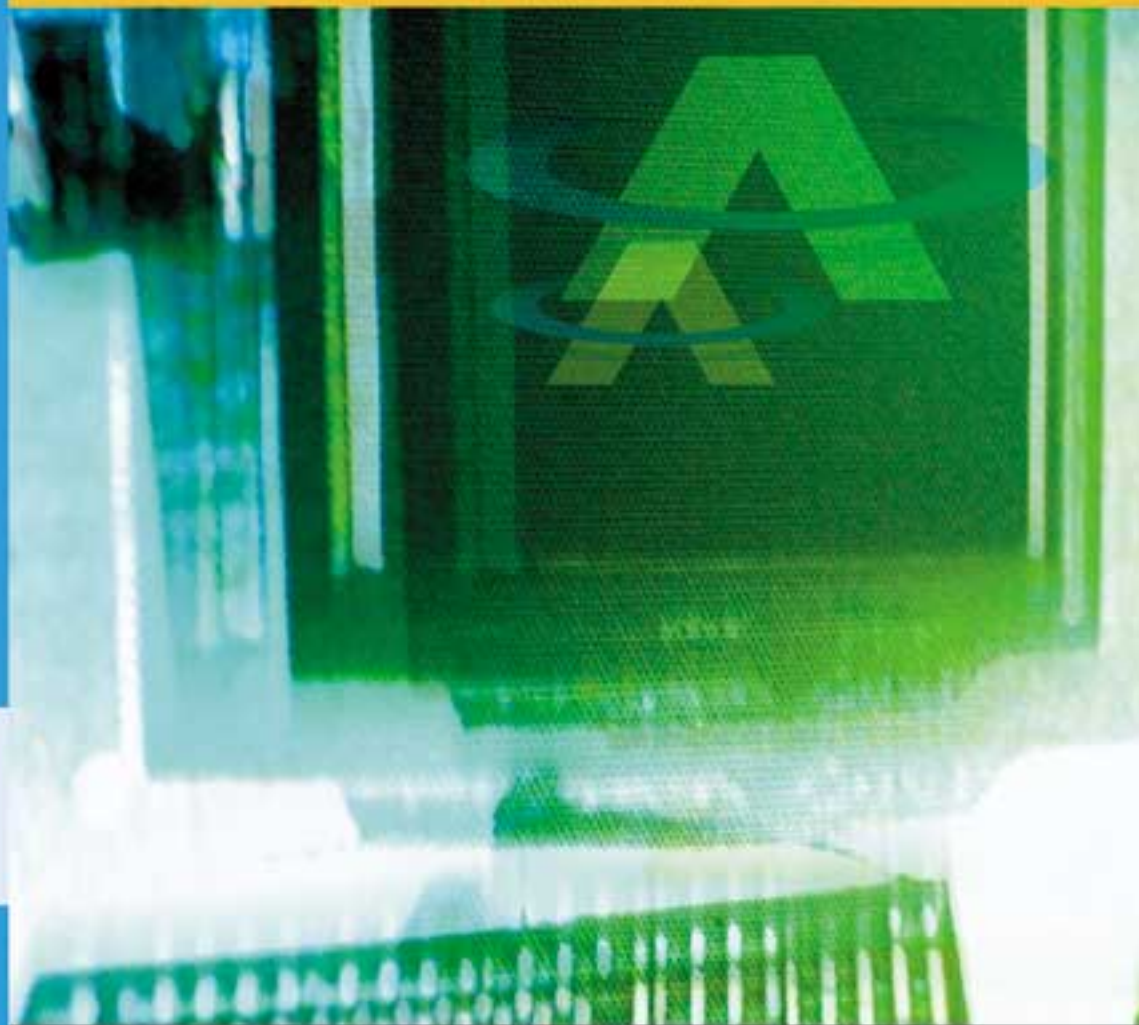
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WINDOWS .NET SERVER: MORE THAN .NET?

Where's Paul Revere when you need him? ".NET Server is coming! .NET Server is coming!"

After the traditional one-year Microsoft delay period, Release Candidate One of Windows .NET Server (WNETS) is now in the hands of enterprise customers, and the final product should be Gladwrapped by year's end. But now that the Empire has finally come marching over the hill, I've got to say that most of this charge is banners and drums—very few muskets. What we've really got is an incremental upgrade to Windows 2000 Server with the .NET Framework bolted on for good measure. Microsoft doesn't much argue this point, though it's certainly more bullish on the importance of the new software than I am, even going so far as to target Windows NT Server users as its intended real converts to .NET Server.

But while IT folk may not find much use for an upgrade to WNETS, .NET developers and those interested in actually building and deploying .NET applications will have a completely different view. For them, WNETS really is going to be a necessity since it's in this server package that Microsoft has chosen to place the beating heart of most .NET

implementations, namely the Common Language Runtime and the class libraries. You even get a free copy of Visual Studio .NET, and Redmond claims there'll be a few more improvements to the .NET Framework included in the shipping version of .NET Server that we won't see in RC1. After all, when it comes to new development features, who needs QA?

Which is an ironic statement, since both Microsoft and most of the independent analyst community think that WNETS really boils down to a field-tested version of Windows 2000 Server (W2KS), and that despite the fact that Redmond just delivered Windows 2000 Service Pack 3, .NET Server really represents the stable, scalable and reliable future of Windows 2000 networks and applications. In fact, some have gone so far as to say that because WNETS is so close to W2KS, this will improve its stability when compared with similar "incremental" operating-system upgrades. After all, the Windows 2000 "field testing" period has given Microsoft time to get the bugs out.

Frankly, I'll believe that when I see it. Microsoft makes no bones that it is banking an awful lot on using .NET fea-

tures to unify both developers and IT managers into deploying .NET Enterprise Server packages as well as custom XML-based Web services. The one will want the other, which in turn will want the third. This type of spiral requirements effect may make for more software sales, but when you mix in brand-new technologies, new development languages and paradigms as well as Redmond's penchant for glossing over QA and security testing, "more reliable and scalable" becomes awfully subjective.

So is there any reason to look at WNETS if you're not building .NET applications at the moment? There are new features, but whether they're enough to warrant an upgrade over a working W2KS installation is up to you.

First, Microsoft claims that WNETS is not only faster overall than W2KS, but that it also gives systems administrators greater control over performance via a souped-up new version of Windows Resource Manager. Plus, Active Directory has had some work done allowing for easier deployment and management, including a new "lite" mode intended for stand-alone applications such as Web sites.

On the heavy end, meaning its Enterprise and Datacenter versions, clustering has been pushed to 8 nodes with an

improved network load balancing scheme. IIS 6 also is supposed to be not only faster than previous versions but also far more stable. Naturally, we'll need to take Microsoft's word for most of this, especially when it comes to the interoperability of all the new .NET hooks.

For those mouthing "security," there's not much to say. You won't find anything new beyond what Redmond promised back in February—though this is by no means inconsequential. The operating system will ship in a hardened default state, forcing systems administrators to turn on services with potential security holes rather than having them open by default. In addition, Microsoft has included an improved version of EFS, Kerberos, PKI and SSL as well as support for smart-card logins and tougher versions of its 802.11 wireless Ethernet authentication features.

So is Windows .NET Server a must-have upgrade? Heck no. Cost alone determines that decision. But it's obvious that WNETS is intended as the main seedling in Redmond's new strategy of effortless application integration services as well as Web services. That's a tall order for Microsoft to fill given its history, but no one can deny that .NET represents a real opportunity. Just don't ignore QA. ■

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WINDOWS WATCH



OLIVER RIST

LIES, DAMNED LIES & JAVA BENCHMARKS

WebSphere's faster! WebLogic's faster! JRun's faster! .NET's faster! Press releases and white papers are often filled with such claims by the major platform vendors. Don't believe it if the vendor ran the benchmark.

True, every now and again a vendor will actually run a competitive benchmark and let the results fall where they may. Too bad—you'll never see those numbers. What you almost always see with vendor benchmarks are numbers that are the results of tweaked or apple-and-oranges testing.

One of the most popular ways to tweak a benchmark is for the vendor to tune the application of the day to produce the best possible performance for a given test and then retune it for the best results for the next test and so on. At the same time, its competitors' products are either not tuned at all or tuned badly.

But, frankly, many vendor benchmark efforts aren't that clever. A benchmark really isn't fair unless all the elements in the test, except the ones you're testing for, are precisely the same. That can be tricky, say, when different J2EE app servers running on different hardware platforms and operating systems are connected to different databases. Or when one app uses different SQL statements than its competitor does.

For a detailed look at how Oracle thinks Microsoft fudged the numbers in

Microsoft's original November 2001 Oracle 9iAS versus Microsoft .NET Benchmark, see its white paper, published in March 2002, at http://otn.oracle.com/tech/java/oc4j/pdf/9ias_net_bench.pdf. Microsoft's May 2002 response is at www.gotdotnet.com/team/compare/petshopfaq.aspx.

This isn't just a Microsoft versus Java issue, of course. BEA (www.bea.com/products/weblogic/server/performance_oracle.shtml), Macromedia (www.macromedia.com/desdev/mx/blueprint/articles/performance.html) and Oracle (www.oracle.com/ip/deploy/ias/feature/index.html?feature_fasterthanbea.html) also have done their own benchmarks based on Java Pet Store and—surprise!—each found that it did the best. And, of course, Microsoft paid for its own repeat test in May 2002 (www.gotdotnet.com/team/compare/Benchmark_ShortRepFinal.pdf). Guess the results.

Do you see a theme here? You're a fool if you trust any of these so-called benchmarks.

Besides, what the heck is Java Pet Store anyway? I'll tell you what it's not. It's not a real benchmark. Rather, it's a J2EE training application that Sun created to help young programmers get their feet wet.

The code isn't optimized, it doesn't

make decent use of Enterprise JavaBeans, and it's a small-scale application with minimal concurrent requirements.

As Oracle put it in the first paper mentioned earlier: "Oracle recognizes that the Java Pet Store application was designed to be a showcase application that exercises a majority of the J2EE APIs and features."

You want a J2EE benchmark? Try ECperf (<http://java.sun.com/j2ee/ecperf>) or Sitraka's PerformaSure (www.sitraka.com/software/performasure), both of which were specifically designed to test speed and scalability.

True, Java Pet Store is an application that could be rewritten to work perfectly well in any client/server environment since its functional requirements really don't call for either a J2EE or a .NET server. That's why Microsoft could make its

own version, called .NET Pet Shop, designed to perform the same functions as Java Pet Store, although the architecture is completely different. Benchmarking Java Pet Store versus .NET Pet Shop really doesn't tell you much of anything about Java versus .NET, except how clever the programmers were.

(A Microsoft spokesman told SD Times that because no impartial third-party organization had been willing to design and execute a .NET versus J2EE benchmark, and because Sun's ECperf license allows testing by J2EE-compatible app servers, the company had no

choice but to create its .NET Pet Shop.)

So what can you do? Well, for starters, look for the following in any benchmark report: Determine who is sponsoring the report, and see if the testing company is affiliated with a platform vendor or some other vendor-centric group. Sometimes that information is hidden away, but that will tell you more about the test results than anything else.

Independent magazine tests are the least likely to be unduly influenced by a single vendor. But, as technology magazines decrease in number, and as platforms become more complex, such tests are harder to find. Also, app servers require more resources for testing than many magazines can afford to devote to such an exercise.

So, it looks like we're stuck with vendor-sponsored tests. By all means read them, but you'll still need to look at the numbers closely. Carefully check the testing methodology and make sure that it spells out exactly how it's testing and what it's testing for.

Even a perfect benchmark tells you only how several applications worked one time for one organization. The only way to know if the world's best application server is your best application server is to test it yourself. ■

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JAVA WATCH



STEVEN J. VAUGHAN-NICHOLS

QUALITY TO GO

As development teams get larger, and projects become more complex, software testing has evolved far beyond simply debugging the app prior to deployment. Organizations today utilize multiple platforms, programming languages and back-end systems, necessitating expertise in a wide range of areas to ensure an application will perform the way it was conceived in the context of a broad software system.

Unfortunately, many organizations do not put the resources into testing that they do into other areas of development. Thus, an application, or a specific EJB or .NET component, might work fine under in-house testing but create problems when integrated into a large, heterogeneous environment. For an organization to find people skilled in, say, all the fine points of the Java platform or .NET, as well as having a deep understanding of Oracle databases or IBM mainframes, is next to impossible, and if the people could be found, they would be very expensive to retain.

Then, of course, there is the issue of maintaining the codebase and keeping it optimized after the application is deployed. This is the bane of a developer's existence; by nature, developers are creative, and unless they have something of a Sherlock Holmes bent, spending time maintaining code isn't something they want to do. Yet in many organizations, a large chunk of the development budget is spent on maintaining and working with existing code. And of course, the resources spent on testing and maintenance—which are being slashed as companies move to cut costs and retain only their top-flight developers—take away from new releases, research and development.

Testing and code maintenance is seen as an entry-level position in many organi-

zations, and the people doing this job are simply putting up with it until they can move into a more creative development role. But in the universe of software engineers, there exists a subset of problem-solvers who are well suited to the task. These engineers are highly sought after by companies such as KeyLabs and ArrAy Inc., where testing and maintenance are the only things they do.

INDUSTRY WATCH



DAVID RUBINSTEIN

Lab Acquisition Corp., which does business under the KeyLabs name in Lindon, Utah, was launched in 1996 by three people out of the Novell development shop who saw a need for large-scale testing in a heterogeneous environment. After changing hands several times, the company is independent once again and has come up with something called KeyAssurance, a technology assurance division that it claims minimizes the risk of deploying applications and new platform paradigms into existing systems.

KeyLabs president Mike Fahnert said that most software development shops don't keep a complete set of testers for systems integration and large-scale testing, claiming that the majority treat testing as an entry-level role, and that the testers all hope to move into development. So keeping current on the latest technologies is difficult.

KeyLabs can bring together experts knowledgeable in the latest standards, platforms and development tools, Fahnert said, to provide help with a development organization's methodology and test case development. It helped MSNBC run live polls during events of the Salt Lake City Olympic Games, ensuring the system would scale during peak usage. During the figure skating competition, for example, viewers could vote for who they felt the winner should be. (This, of course, assumed the viewers

weren't swayed by the Russian Mafia to vote in any particular way.) KeyLabs also works with Sun on its 100% Pure Java certification program, Fahnert noted, while adding that its customers' marketing teams also use the lab's work as a way to validate their corporations' messages.

At ArrAy, code maintenance has been refined into a methodology that company co-founder Charlie Palmer said reduces the costs associated with the task, as well as increasing the performance of the application while increasing the productivity of the organization's developers, who are now freed up to work on new projects.

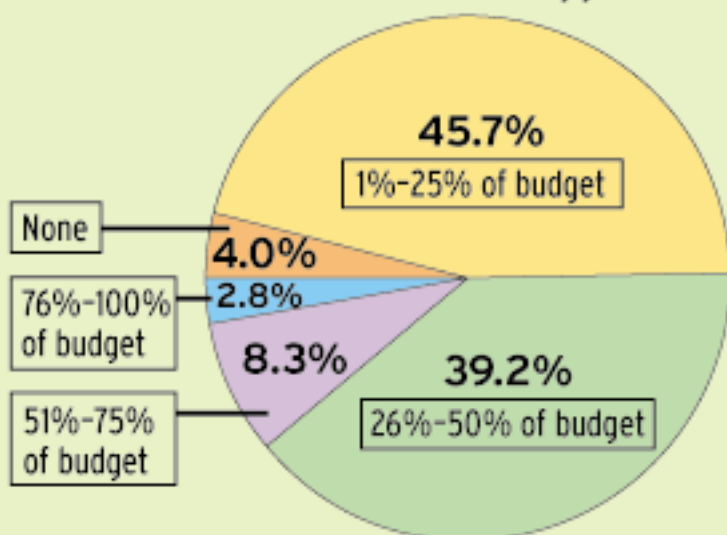
While development managers tend to look at testing and maintenance as an IT issue, Palmer says it clearly is a business issue, and cites two reasons. The first is customer satisfaction; it is easier to retain old customers than it is to make new ones, and if the software delivered to them fails in a critical application, that revenue is gone. The second is that companies generate a lot of revenue from annual maintenance agreements. If a software development shop is spending too much to maintain code, or not enough so it can't maintain the code well, that's not cost-effective to the business.

ArrAy's methodology is to put together teams of engineers based on their workload, skill sets and willingness to learn new technologies, then have them do "triage" on the code to think the problem through before diving in without a clear idea of what to do. Then, the group will set hypotheses that are most likely to resolve the problem, leaving milestones and checkpoints along the way.

In this scaled-down climate, doing more with less could also mean handing off the "grunt" work to experts who actually enjoy getting their hands dirty under the hood, while leaving the driving of new ideas and projects to developers. ■

David Rubinstein is executive editor of SD Times.

What Percentage of Your Software Budget Is Allocated to Maintenance/Support?



Conventional wisdom is that software maintenance consumes a vast amount of IT resources—and as an enterprise matures, the size of the codebase means that programmers focus more on maintenance than on new applications development. Is that true? In many cases, yes, according to Evans Data Corp.'s most recent Enterprise Development Management Issues survey.

In the survey, more than half of the respondents indicated that software maintenance and support consumed more than a quarter of their software budget. Fortunately, fewer than 3 percent said that more than 75 percent of their software budget was allocated for maintenance and support.

Source: Enterprise Development Management Issues 2002, Vol. 1 © Evans Data Corp.
www.evansdata.com

BUSINESS BRIEFS

CIBC World Markets will acquire from **Accenture** its venture and investment portfolio, which includes more than 80 early- and midstage technology companies primarily in the software sector. Terms were not disclosed. CIBC World Markets, the investment arm of the **Canadian Imperial Bank of Commerce**, has extensive transaction experience in enterprise and e-business software. Its technology investment banking group has raised more than \$39 million in equity financings since 1998. Accenture will retain a 5 percent stake in the portfolio, and the two companies will work together so CIBC World Markets can draw on Accenture's expertise in the technology sector. Accenture is a leading management consulting and technology services organization . . . **Anysoft Inc.**, which had planned to enter the enterprise application integration market in February by providing programmatic access to applications, has ceased operation, according to a source close to the company. The source indicated that the company has laid off its staff, but has not filed for Chapter 11 bankruptcy protection. ■



CALENDAR OF EVENTS

- | | |
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| Quality Week
San Francisco
SOFTWARE RESEARCH INC.
www.soft.com/QualWeek/QW2002 | Sept. 3-6 |
| Windows Server DevCon
Seattle
MICROSOFT CORP.
www.microsoft.com/misc/external/serverdevcon | Sept. 3-6 |
| Comdex Atlanta
Atlanta
KEY3MEDIA GROUP INC.
www.comdex.com/atlanta | Sept. 9-13 |
| VSLive
Orlando, Fla.
FAWCETTE TECHNICAL PUBLICATIONS
www.vslive.com/2002/or | Sept. 14-19 |
| Communications Design Conference
San Jose, Calif.
CMP MEDIA LLC
www.commdesignconference.com | Sept. 23-26 |
| Internet World
New York
PENTON MEDIA INC.
www.internetworld.com/events/fall2002 | Sept. 30-Oct. 3 |
| Mac OS X Conference
Santa Clara, Calif.
O'REILLY & ASSOCIATES INC.
http://conferences.oreillynet.com/macosex2002 | Sept. 30-Oct. 3 |
| Web Services Development Conference
New York
BZ MEDIA LLC
www.wsdevcon.com | Oct. 1-2 |
| Web Services/JDJ/XML/Wireless Edge West
San Jose, Calif.
SYS-CON MEDIA INC.
www.sys-con.com/WebServicesEdge2002West | Oct. 1-3 |
| Symposium/ITxpo
Lake Buena Vista, Fla.
GARTNER INC.
www.gartner.com/2_events/symposium/sym12/sym12.jsp | Oct. 6-11 |
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